AS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON DECEMBER 5, 2000

REGISTRATION STATEMENT NO. 333-45996

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

AMENDMENT NO. 5
TO
FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

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

DELAWARE	3826	04-3306140
(State or Other Jurisdiction of Incorporation or Organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification No.)

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84 OCTOBER HILL ROAD
HOLLISTON, MASSACHUSETTS 01746-1371
(508) 893-8066
(Address, including zip code, and telephone number, including area code, of Registrant's principal executive office)

CHANE GRAZIANO
CHIEF EXECUTIVE OFFICER
HARVARD BIOSCIENCE, INC.
84 OCTOBER HILL ROAD
HOLLISTON, MASSACHUSETTS 01746-1371
(508) 893-8066
(Name, address, including zip code, and telephone number, including area code, of agent for service)

COPIES TO:

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GOODWIN, PROCTER & HOAR LLP	JOHN J. CHENEY, ESQ.
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BOSTON, MASSACHUSETTS 02109-2881	ONE FINANCIAL CENTER
(617) 570-1000	BOSTON, MASSACHUSETTS 02111
	(617) 542-6000

APPROXIMATE DATE OF COMMENCEMENT OF PROPOSED SALE TO THE PUBLIC: As soon as practicable after this Registration Statement becomes effective.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, 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 for the same offering. / / _____

If this Form is a post-effective amendment filed pursuant to Rule 462(c) 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. / / _____

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. / / _____

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box. / / _____

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 SEC, ACTING PURSUANT TO SECTION 8(a), MAY DETERMINE.

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THE INFORMATION IN THIS PROSPECTUS IS NOT COMPLETE AND MAY BE CHANGED. WE MAY NOT SELL THESE SECURITIES UNTIL THE REGISTRATION STATEMENT FILED WITH THE SECURITIES AND EXCHANGE COMMISSION IS EFFECTIVE. THIS PROSPECTUS IS NOT AN OFFER TO SELL THESE SECURITIES, AND IT IS NOT SOLICITING OFFERS TO BUY THESE SECURITIES IN ANY STATE IN WHICH THE OFFER OR SALE IS NOT PERMITTED.

SUBJECT TO COMPLETION, DATED DECEMBER 5, 2000

PROSPECTUS

[THOMAS WEISEL PARTNERS LLC LOGO]

[HARVARD BIOSCIENCE LOGO]

6,422,450 SHARES
COMMON STOCK

- ---

We are selling 6,250,000 shares of our common stock and our president as a selling stockholder is offering an additional 172,450 shares. We will not receive any of the proceeds from the sale of shares by the selling stockholder. We have granted the underwriters a 30-day option to purchase up to an additional 937,500 shares to cover over-allotments, if any.

This is an initial public offering of our common stock. We currently expect the initial public offering price to be between $11.00 and $13.00 per share. We have been approved for quotation of our common stock on the Nasdaq National Market under the symbol "HBIO."

- ---
INVESTING IN OUR COMMON STOCK INVOLVES RISKS. SEE "RISK FACTORS" ON PAGE 6.
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	PER SHARE	TOTAL
Public offering price	$	$
Underwriting discount	$	$
Proceeds, before expenses, to us	$	$
Proceeds, before expenses, to the selling stockholder	$	$

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR DETERMINED IF THIS PROSPECTUS IS TRUTHFUL OR COMPLETE. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.
- ---

THOMAS WEISEL PARTNERS LLC

DAIN RAUSCHER WESSELS

ING BARINGS

The date of this prospectus is , 2000

EDGAR GRAPHICS DESCRIPTIONS

INSIDE FRONT COVER-GATEFOLD

Pages 2 and 3: Gatefold has title "Harvard Bioscience Products and the Bottlenecks in Post-Genomics Drug Discovery" at the top. Below these words is a process flow diagram illustrating the drug discovery process and the key bottlenecks within this process. The diagram begins on the upper left portion of the gatefold and flows horizontally to the upper right portion of the gatefold. Below and to the right of the diagram is an orange arrow indicating that orange portions of the diagram represent bottlenecks in the drug discovery process. The diagram is initially split into two parallel tracks which merge into a single track near the middle of the pages as the flow diagram moves to the right. The upper track of the diagram is titled "Compound Development" and includes a green arrow titled "Compound Libraries". Below the arrow are the words "Combinatorial Chemistry". The lower track of the diagram is titled "Target Discovery" and includes two arrows. The first arrow is green and is titled "Target Identification". Above this arrow is the word "Genomics". The next arrow to the right is orange and is titled "Target Validation". Above this arrow is the word "Proteomics". Following the "Compound Libraries" arrow on the upper track and the "Target Validation" arrow on the lower track, the two tracks of the diagram combine and include green and orange arrows to illustrate the remaining stages and key bottlenecks in the drug discovery process. The individual arrows from left to right include an orange arrow titled "Assay Development" followed by a green arrow titled "High Throughput Screening". These two arrows in the diagram appear under the title "Primary Screening". To the right of the "High Throughput Screening" arrow is an orange arrow titled "Lead Optimization" followed by an orange arrow titled "ADMET Screening". These two arrows in the diagram appear under the title "Secondary Screening". To the right of the "ADMET Screening" arrow is a green arrow titled "Clinical Trials", the final arrow in the process flow diagram.

The lower portion of the gatefold consists of product descriptions. The lower left portion begins with the words "Protein Purification" with the following product photos and short descriptions appearing below "Protein Purification". A drawing of a pipette tip is followed by the words "PrepTip-TM Coated pipette tips for the purification of minute protein samples". Below this is a photo of spin columns followed by the words "UltraMicro Spin Columns Small plastic tubes containing purification media that are spun in a centrifuge". Below this is a photo of disposable dialyzers followed by the words "Disposable Dialyzers small plastic chambers capped with a membrane that retains proteins but passes contaminants". Below this are the words "Protein Analysis" with the following product photos and short descriptions appearing below "Protein Analysis". A photo of a DNA/RNA/protein calculator followed by the words "GeneQuant Pro-TM DNA/RNA/Protein calculators". Below this are photos of a purple spectrophotometer, a yellow spectrophotometer and a green spectrophotometer followed by the words "UltroSpec-TM Range of spectrophotometers for molecular biology". Below this is a photo of an amino acid analysis system followed by the words "Biochrom-TM 20 Amino Acid Analysis System".

The lower right portion begins with the word "Absorption". Below this is a photo of an absorption measurement chamber followed by the words "NaviCyte-TM Absorption measurement chambers". Below this is the word "Distribution" with a photo of an equilibrium dialysis plate and followed by the words "96 Well Equilibrium Dialysis Plate Equilibrium dialysis plate for the measurement of the interaction of drugs and proteins". Below this are the words "Metabolism and Elimination" with a photo of an isolated organ system and followed by the words "Isolated Organ Systems Liver and kidney systems used for studying metabolism and elimination". Below this is the word "Toxicology" with a photo of a desktop computer and the ScanTox product followed by the words "ScanTox-TM Screening system for testing toxicology without the use of laboratory animals". Below this is a photo of an infusion pump followed by the words "PHD 2000 Infusion pump for toxicology testing".

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PROSPECTUS SUMMARY

THIS SUMMARY HIGHLIGHTS INFORMATION CONTAINED ELSEWHERE IN THIS PROSPECTUS. YOU SHOULD READ THE ENTIRE PROSPECTUS CAREFULLY, INCLUDING THE "RISK FACTORS" SECTION.

OUR COMPANY

We are a global developer, manufacturer and marketer of innovative, enabling tools used in drug discovery research at pharmaceutical and biotechnology companies, universities and government laboratories. We sell approximately 10,000 products to more than 5,000 customers in over 60 countries. Our proprietary products accounted for approximately 82% of our revenues for the nine months ended September 30, 2000. We have designed our tools to accelerate the speed and to reduce the cost at which our customers can discover and commercialize new drugs. By providing research tools, we participate in the revolutions in genomics, the study of genes, and proteomics, the study of proteins, without bearing the risks inherent in attempting to discover new drugs.

Since our reorganization in March 1996, we have focused on developing tools to alleviate two critical bottlenecks in the drug discovery process:

- PROTEIN PURIFICATION, which is the removal of contaminants such as salts, buffers, detergents and cellular debris from a protein sample, and

- ADMET SCREENING, which is the testing of the absorption, distribution, metabolism, elimination and toxicology properties of drug candidates.

Our proteomics products are tools that allow researchers to purify and analyze proteins contained in a sample. Our ADMET screening products are tools that enable researchers to test drug candidates to determine their absorption, distribution, metabolism, elimination and toxicology properties prior to conducting costly clinical trials.

We market our products primarily through our 1,000 page catalog to approximately 100,000 researchers worldwide. Our catalog is also available on our website. We distribute most of our products directly through our operations in the United States, the United Kingdom, Germany, France and Canada. In addition to our catalog distribution channel, we have a long-standing distribution and marketing relationship with Amersham Pharmacia Biotech, or APBiotech, one of the largest companies in the life sciences industry.

OUR OPPORTUNITY

Drug discovery is a time-consuming and costly process. In the pre-genomics era, the compound development, primary screening and clinical trials stages were bottlenecks in this process. The recent successes of genomics, combinatorial chemistry (the automated production of large numbers of chemical compounds) and high throughput screening have alleviated the bottlenecks at the compound development and primary screening stages. However, these bottlenecks have been replaced by bottlenecks at later stages in the drug discovery process. Our opportunity lies in alleviating these bottlenecks with products that increase the productivity and reduce the cost of drug discovery.

OUR PRODUCTS

We have a broad array of established products for proteomics and ADMET screening. We believe our products offer drug discovery researchers the most comprehensive protein purification and

ADMET screening solutions. In the past two years, we have expanded our product base by introducing the following proprietary tools:

PROTEIN PURIFICATION:

- specially coated pipette tips, which are small plastic tubes coated on the inside with a material that selectively extracts proteins but not contaminants,

- micro spin columns, which are small plastic tubes partially filled with a material that selectively extracts proteins but not contaminants, and

- micro dialyzers, which are small plastic tubes each containing a dialysis membrane which allows small molecules to pass through but retains large molecules such as proteins.

ADMET SCREENING:

- NaviCyte diffusion chambers, which measure drug absorption by simulating membranes in the human body,

- small plastic plates with 96 wells, which each contain a dialysis membrane that allows small molecules to pass through but retains large molecules such as proteins, and

- ScanTox instruments, which enable toxicology testing without the use of animals.

In protein purification, these new products increase productivity and reduce cost by avoiding the cumbersome sample handling steps required by current technology and by being compatible with automated liquid-handling robots. Many of the products are available in 96 well plate formats. In ADMET screening, these new products lower cost and increase automation by using molecular, cellular, tissue and organ based assays to reduce the use of live animals.

In addition to our proprietary products, we provide a broad selection of non-proprietary products that are frequently used in conjunction with our proprietary products. We seek to be a single source for our customers' product needs in protein purification and ADMET screening.

OUR STRATEGY

Our goal is to become the leading provider of innovative, enabling technologies and products for proteomics and ADMET research in the drug discovery process. Key elements of our strategy are to:

- establish our new proteomics and ADMET screening products as industry standards,

- launch a broad range of innovative new tools for drug discovery,

- leverage our existing distribution and marketing channels,

- provide a single source of tools for our customers' research needs in proteomics and ADMET screening, and

- acquire complementary technologies.

We organized our company as a Massachusetts corporation on March 7, 1996 in connection with our purchase of a portion of the assets of Harvard Apparatus, a business which, with its predecessors, had been in existence since 1901. The initial Harvard Apparatus catalog was published in 1901 by Dr. William T. Porter, a professor at Harvard Medical School and the founder of the Harvard Apparatus business. We will be reincorporated by merger in Delaware prior to the closing of this offering. In connection with the reincorporation, we will change our corporate name from Harvard Apparatus, Inc. to Harvard Bioscience, Inc. We have no affiliation with Harvard University. Our principal executive offices are located at 84 October Hill Road, Holliston, Massachusetts 01746. Our telephone number at that location is (508) 893-8066 and our Internet address is www.harvardbioscience.com. The information contained on our website is not part of this prospectus.

We have six wholly-owned subsidiaries, Biochrom Ltd. (United Kingdom), Harvard Apparatus Limited (United Kingdom), Hugo Sachs Elektronik-Harvard Apparatus GmbH (Germany), Harvard Apparatus S.A.R.L. (France), Harvard Apparatus FSC, Inc. (United States) and Ealing Scientific Ltd. (Canada).

The names Harvard Bioscience and Harvard Apparatus and our logo are names and trademarks that we believe belong to us. We have the rights to numerous trademarks and trade names including AmiKa, Biochrom, CPK, GeneQuant, GeneQuantPro, NaviCyte, NovaSpec, PrepTip, PureTip, ScanTox, Stronghold and UltroSpec. This prospectus also contains the trademarks and trade names of other entities that are the property of their respective owners.

THE OFFERING

Common stock offered by us	6,250,000 shares
Common stock offered by our president as a selling stockholder	172,450 shares
Common stock outstanding after the offering	24,782,422 shares
Use of proceeds	For payment of existing debt, redemption of our series A redeemable preferred stock, potential acquisitions, working capital and general corporate purposes.
Nasdaq National Market symbol	HBIO

The above information is based on 18,532,422 shares outstanding as of October 15, 2000 and excludes:

- 599,096 shares issuable upon exercise of options then outstanding at a weighted average exercise price of $1.00 per share.

Unless otherwise noted, this prospectus assumes:

- no exercise of the underwriters' over-allotment,
- an assumed initial offering price of $12.00 per share,
- a 19.71-for-1 stock split of our common stock effected in connection with this offering,
- our reincorporation by merger in Delaware and our related name change prior to the closing of this offering,
- the redemption of our outstanding series A redeemable preferred stock upon the closing of this offering,
- the automatic conversion of our outstanding series B convertible preferred stock into 955,935 shares of our common stock upon the closing of this offering,
- the issuance of 8,509,905 shares of our common stock upon exercise of all outstanding warrants at a weighted average exercise price of $0.0005 per share prior to the closing of this offering, and
- the amendment and restatement of our certificate of incorporation in connection with this offering.

SUMMARY FINANCIAL DATA

	PREDECESSOR COMPANY FISCAL YEAR ENDED DECEMBER 31, 1995	PREDECESSOR COMPANY FOR THE PERIOD FROM JANUARY 1, 1996 TO MARCH 14, 1996	FOR THE PERIOD FROM INCEPTION MARCH 15, 1996 TO DECEMBER 31, 1996
	(UNAUDITED)	(UNAUDITED)	
	(IN THOUSANDS, EXCEPT SHARE AND PER SHARE DATA)		
STATEMENT OF OPERATIONS DATA:			
Revenues	$ 10,032	$ 1,989	$ 8,198
Cost of goods sold	5,286	1,059	4,080
Stock compensation expense	--	--	--
Gross profit	4,746	930	4,118
Other operating expenses	4,252	810	3,141
Stock compensation expense	--	--	--
Operating income (loss)	494	120	977
Other (expense) income:			
Common stock warrant interest expense	--	--	--
Interest expense, net	(472)	(90)	(177)
Amortization of deferred financing costs	--	--	--
Other	(62)	(139)	98
Other expense, net	(534)	(229)	(79)
(Loss) income before income taxes	(40)	(109)	898
Income taxes	85	--	362
Net (loss) income	$ (125)	$ (109)	$ 536
Preferred stock dividends	--	--	(97)
Net (loss) income available to common stockholders	$ (125)	$ (109)	$ 439
(Loss) income per share:			
Basic	$ (0.01)	$ (0.01)	$ 0.04
Diluted	$ (0.01)	$ (0.01)	$ 0.02
Weighted average common shares:			
Basic	10,259,410	10,259,410	10,259,410
Diluted	10,259,410	10,259,410	20,241,145
Pro forma (loss) income per share:			
Basic			
Diluted			
Pro forma weighted average common shares:			
Basic			
Diluted			

	FISCAL YEAR ENDED DECEMBER 31,			NINE MONTHS ENDED SEPTEMBER 30,	
	1997	1998	1999	1999	2000
				(UNAUDITED)	
	(IN THOUSANDS, EXCEPT SHARE AND PER SHARE DATA)				
STATEMENT OF OPERATIONS DATA:					
Revenues	$ 11,464	$ 12,154	$ 26,178	$ 18,470	$ 22,069
Cost of goods sold	5,128	5,351	13,547	9,359	11,462
Stock compensation expense	--	--	--	--	151
Gross profit	6,336	6,803	12,631	9,111	10,456
Other operating expenses	4,217	4,391	8,151	5,862	7,723
Stock compensation expense	--	--	3,284	937	13,181
Operating income (loss)	2,119	2,412	1,196	2,312	(10,448)
Other (expense) income:					
Common stock warrant interest expense	(117)	(1,379)	(29,694)	(7,403)	(70,920)
Interest expense, net	(223)	(210)	(657)	(468)	(655)
Amortization of deferred financing costs	--	--	(63)	(44)	(56)
Other	10	31	(65)	46	(428)
Other expense, net	(330)	(1,558)	(30,479)	(7,869)	(72,059)

(Loss) income before income taxes	1,789	854	(29,283)	(5,557)	(82,507)
Income taxes	682	783	137	649	1,354
Net (loss) income	$ 1,107	$ 71	$ (29,420)	$ (6,206)	$ (83,861)
Preferred stock dividends	(122)	(122)	(157)	(115)	(123)
Net (loss) income available to common stockholders	$ 985	$ (51)	$ (29,577)	$ (6,321)	$ (83,984)
(Loss) income per share:					
Basic	$ 0.13	$ (0.01)	$ (5.28)	$ (1.13)	$ (13.11)
Diluted	$ 0.06	$ (0.01)	$ (5.28)	$ (1.13)	$ (13.11)
Weighted average common shares:					
Basic	7,406,486	5,598,626	5,598,626	5,598,626	6,407,682
Diluted	17,500,194	5,598,626	5,598,626	5,598,626	6,407,682
Pro forma (loss) income per share:					
Basic			$ 0.01		$ (0.82)
Diluted			$ 0.01		$ (0.82)
Pro forma weighted average common shares:					
Basic			14,902,100		15,873,527
Diluted			17,381,677		15,873,527

Pro forma basic and diluted net (loss) income per share have been calculated assuming the conversion of all outstanding shares of convertible preferred stock into common stock and the exercise of all outstanding warrants for common stock as if they had been converted or exercised on the dates of issuance. Accordingly, common stock warrant interest expense and dividends associated with convertible preferred shares are excluded from the pro forma per share amounts.

The financial data presented above for the year ended December 31, 1995 and for the period from January 1, 1996 to March 14, 1996 represents the financial data of our predecessor company without any adjustments relating to our purchase of a portion of its assets.

	AS OF SEPTEMBER 30, 2000		
	ACTUAL	PRO FORMA	PRO FORMA AS ADJUSTED
BALANCE SHEET DATA:			
Cash and cash equivalents	$ 2,149	$ 2,154	$68,904
Working capital	1,025	1,030	67,780
Total assets	23,236	23,241	89,991
Long-term obligations, net of current portion	5,730	5,730	5,730
Preferred stock	2,500	1,500	--
Common stock warrants	102,115	--	--
Stockholders' equity (deficit)	(97,018)	6,102	74,352

The preceding table presents a summary of our balance sheet data as of September 30, 2000:

- on an actual basis assuming the filing of an amended and restated certificate of incorporation to increase the number of authorized shares of common stock,

- on a pro forma basis to give effect to the conversion of all outstanding shares of convertible preferred stock into an aggregate of 955,935 shares of common stock, the exercise of all outstanding warrants for an aggregate of 8,509,905 shares of common stock upon the closing of this offering and the filing of our amended and restated certificate of incorporation prior to the effective date of this offering, and

- on a pro forma as adjusted basis to reflect the sale of 6,250,000 shares of common stock by us in this offering at an assumed initial offering price of $12.00 per share, after deducting estimated underwriting discounts, commissions and offering expense and the redemption of all outstanding shares of redeemable preferred stock upon the closing of this offering.

RISK FACTORS

AN INVESTMENT IN OUR COMMON STOCK INVOLVES SIGNIFICANT RISKS. YOU SHOULD CAREFULLY CONSIDER THE FOLLOWING RISKS BEFORE YOU DECIDE TO BUY OUR COMMON STOCK.

IF WE ARE UNABLE TO ACHIEVE AND SUSTAIN MARKET ACCEPTANCE OF OUR NEW PROTEOMICS AND ADMET SCREENING PRODUCTS ACROSS THEIR BROAD INTENDED RANGE OF APPLICATIONS, WE WILL NOT GENERATE EXPECTED REVENUE GROWTH.

Our business strategy depends on our successfully developing and commercializing our new proteomics and ADMET screening technologies to meet our customers' expanding needs and demands. For example, our recent acquisition of AmiKa Corporation involved the purchase of the technology that we are using to develop our 96 well plate for serum protein binding analysis. Market acceptance of this and other new products will depend on many factors, including the extent of our marketing efforts and our ability to demonstrate to existing and potential customers that our technologies are superior to other technologies and products that are available now or may become available in the future. If our new products do not gain market acceptance, it could materially adversely affect our business and future growth prospects.

OUR PRODUCTS COMPETE IN MARKETS THAT ARE SUBJECT TO RAPID TECHNOLOGICAL CHANGE, AND THEREFORE ONE OR MORE OF OUR 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, our product lines may be made obsolete unless we are able to continually improve our existing products and develop new products. To meet the evolving needs of our customers, we must continually enhance our current and planned products and develop and introduce new products. However, we may experience difficulties which may delay or prevent the successful development, introduction and marketing of new products or product enhancements. In addition, our product lines are based on complex technologies which are subject to rapid change as new technologies are developed and introduced in the marketplace. We may have difficulty in keeping abreast of the rapid changes affecting each of the different markets we serve or intend to serve. Our failure to develop and introduce products in a timely manner in response to changing technology, market demands or the requirements of our customers could cause our product sales to decline, and we could experience significant losses.

We offer and plan to offer a broad product line and have incurred and expect to continue to incur substantial expenses for development of new products and enhanced versions of our existing products. The speed of technological change in our market may prevent us from being able to successfully market some or all of our products for the length of time required to recover their often significant development costs. Failure to recover the development costs of one or more products or product lines could decrease our profitability or cause us to experience significant losses.

WE HAVE LIMITED EXPERIENCE IN MANUFACTURING SOME OF OUR PRODUCTS WHICH COULD CAUSE PROBLEMS OR DELAYS RESULTING IN LOST REVENUE.

We have only recently begun to manufacture and therefore currently have limited manufacturing capacity for some of our products, such as our PrepTip protein purification pipette tips. If we fail to manufacture and deliver products in a timely manner, our relationships with our customers could be seriously harmed, and our revenue could decline. To achieve the production levels necessary for successful commercialization, we will need to scale-up our manufacturing facilities and establish automated manufacturing methods and quality control procedures. We cannot assure you that manufacturing or quality control problems will not arise as we attempt to scale-up our production or that we can scale-up manufacturing and quality control in a timely manner or at commercially

reasonable costs. If we are unable to manufacture these products consistently on a timely basis because of these or other factors, we may not achieve the level of sales from these products that we otherwise anticipate.

IF AMERSHAM PHARMACIA BIOTECH TERMINATES ITS DISTRIBUTION AGREEMENT WITH US OR FAILS TO PERFORM ITS OBLIGATIONS UNDER OUR DISTRIBUTION AGREEMENT, IT COULD IMPAIR THE MARKETING AND DISTRIBUTION EFFORTS FOR SOME OF OUR PRODUCTS AND RESULT IN LOST REVENUES.

For the nine months ended September 30, 2000, approximately 39% of our revenues were generated through an agreement with Amersham Pharmacia Biotech, or APBiotech, under which APBiotech acts as our primary marketing and distribution channel for the products of our Biochrom subsidiary. Under the terms of this agreement, we are restricted from allowing another person or entity to distribute, market and sell the majority of the products of our Biochrom subsidiary. We are also restricted from making or promoting sales of the majority of the products of our Biochrom subsidiary to any person or entity other than APBiotech or its authorized subdistributors. We have little or no control over APBiotech's marketing and sales activities or the use of its resources. APBiotech may fail to purchase sufficient quantities of products from us or perform appropriate marketing and sales activities. The failure by APBiotech to perform these activities could materially adversely affect our business and growth prospects during the term of this agreement. In addition, our inability to maintain our arrangement with APBiotech for product distribution, could materially impede the growth of our business and our ability to generate sufficient revenue. Our agreement with APBiotech may be terminated under some circumstances, including in the event of a breach of a material term by us. This agreement has a perpetual term; however, it may be terminated by either party upon 18 months' prior written notice. While we believe our relationship with APBiotech is good, we cannot guarantee that the contract will be renewed or that APBiotech will aggressively market our products in the future.

WE MAY BE ADVERSELY AFFECTED BY THREATENED LITIGATION INVOLVING HARVARD UNIVERSITY.

We received correspondence from counsel to Harvard University on November 7, 2000 alleging trademark infringement, false designation of origin, unfair competition and cybersquatting and threatening legal action against us if we do not take certain steps, including ceasing our use of the term "Harvard Bioscience" and other terms containing the term "Harvard." We do not currently intend to take such steps, and we believe it is likely that Harvard University will pursue this matter against us. This legal action could include, among other things, the filing of a complaint against us seeking injunctive relief and treble damages with respect to these claims. We may suffer adverse consequences as a result of this matter which we cannot now predict. If claims for injunctive relief or other damages are asserted and are decided against us, we could suffer monetary damages, lose our 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. In addition, any lawsuit or claim for injunctive relief may result in significant litigation expenses.

OUR COMPETITORS AND POTENTIAL COMPETITORS MAY DEVELOP PRODUCTS AND TECHNOLOGIES THAT ARE MORE EFFECTIVE OR COMMERCIALLY ATTRACTIVE THAN OUR PRODUCTS.

We expect to encounter increased competition from both established and development-stage companies that continually enter our market. We anticipate 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, our principal competition comes from established companies that provide products which perform many of the same functions for which we market our products. Our competitors may develop or market products that are more effective or commercially attractive than our current or future products. Many of our competitors have substantially greater financial, operational, marketing and technical resources than we do. Moreover, these competitors may offer broader product lines and tactical discounts, and may have greater name recognition. In addition, we may face competition from new entrants into our field. We may not have the financial resources, technical expertise or marketing, distribution or support capabilities to compete successfully in the future.

IF WE ARE UNABLE TO EFFECTIVELY PROTECT OUR INTELLECTUAL PROPERTY, THIRD PARTIES MAY USE OUR TECHNOLOGY, WHICH WOULD IMPAIR OUR ABILITY TO COMPETE IN OUR MARKETS.

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

In addition to patent protection, we also rely on protection of trade secrets, know-how and confidential and proprietary information. To maintain the confidentiality of trade secrets and proprietary information, we generally seek to enter into confidentiality agreements with our employees, consultants and strategic partners upon the commencement of a relationship with us. However, we 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 our 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 our trade secrets and other proprietary information would impair our competitive advantages and could have a material adverse effect on our operating results, financial condition and future growth prospects.

WE MAY BE INVOLVED IN LAWSUITS TO PROTECT OR ENFORCE OUR PATENTS WHICH WOULD BE EXPENSIVE AND TIME-CONSUMING.

In order to protect or enforce our patent rights, we may initiate patent litigation against third parties. We 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 our products are based on patents which are closely surrounded by patents held by competitors or potential competitors. As a result, we believe there is a greater likelihood of a patent dispute than would be expected if our 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 our technical and management personnel from their normal responsibilities. We may not prevail in any of these suits. An adverse determination of any litigation or defense proceedings could put our patents at risk of being invalidated or interpreted narrowly and could put our 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 our 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 our stock to decline.

OUR SUCCESS WILL DEPEND PARTLY ON OUR ABILITY TO OPERATE WITHOUT INFRINGING ON OR MISAPPROPRIATING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS.

We 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 we do not prevail in any intellectual property litigation, in addition to any damages we might have to pay, we could be required to stop the infringing activity, or obtain a license to or design around the intellectual property in question. If we are unable to obtain a required license on acceptable terms, or are unable to design around any third party patent, we may be unable to sell some of our products and services, which could result in reduced revenue.

AmiKa Corporation, whose assets we purchased in July 2000, has 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, we believe that this matter has been concluded. However, we cannot assure you that this third party competitor will not assert these or similar claims in the future. We do not currently derive a significant portion of our 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 AFFECT ON US.

We currently amortize goodwill purchased in our acquisitions on a straight line basis ranging from 5 to 15 years. At September 30, 2000, we had unamortized goodwill of $9.1 million, or 39.4% of total assets. Any changes in accounting rules under generally accepted accounting principles that reduce the period over which we may amortize goodwill may have an adverse effect on our ability to consummate future acquisitions and our financial results. A shorter goodwill amortization period would increase annual amortization expense and reduce our net income over the amortization period. In addition, we continually evaluate whether any portion of the remaining balance of goodwill may not be recoverable. If it is determined in the future that a portion of our goodwill is impaired, we may be required to write off that portion of our goodwill which would have an adverse effect on our net income for the period in which the write off occurs.

WE ARE DEPENDENT UPON OUR LICENSED TECHNOLOGIES AND MAY NEED TO OBTAIN ADDITIONAL LICENSES IN THE FUTURE TO OFFER OUR PRODUCTS AND REMAIN COMPETITIVE.

We have licensed key components of our technologies from third parties. While we do not currently derive a material portion of our revenue from products that depend on these licensed technologies, we may in the future. If our license agreements were to terminate prematurely or if we breach the terms of any licenses or otherwise fail to maintain our rights to these technologies, we may lose the right to manufacture or sell our products that use these licensed technologies. In addition, we may need to obtain licenses to additional technologies in the future in order to keep our products competitive. If we fail to license or otherwise acquire necessary technologies, we may not be able to develop new products that we need to remain competitive.

MANY OF OUR CURRENT AND POTENTIAL CUSTOMERS ARE FROM THE PHARMACEUTICAL AND BIOTECHNOLOGY INDUSTRIES AND ARE SUBJECT TO RISKS FACED BY THOSE INDUSTRIES.

We derive a substantial portion of our revenues from pharmaceutical and biotechnology companies. We expect that pharmaceutical and biotechnology companies will continue to be our major source of revenues for the foreseeable future. As a result, we are 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 our customers purchasing fewer products from us as they reduce their research and development expenditures.

In addition, we are 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 our customers, including universities, government research laboratories, private foundations and other institutions, obtain funding for the purchase of our 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 our products were to decrease, our business and results of operations could be materially adversely affected.

OUR BUSINESS IS SUBJECT TO ECONOMIC, POLITICAL AND OTHER RISKS ASSOCIATED WITH INTERNATIONAL REVENUES AND OPERATIONS.

Since we manufacture and sell our products worldwide, our business is subject to risks associated with doing business internationally. Our revenues from our non-U.S. operations represented approximately 69% of our total revenues for the nine months ended September 30, 2000. We anticipate that revenue from international operations will continue to represent a substantial portion of our total revenues. In addition, a number of our manufacturing facilities and suppliers are located outside the United States. Accordingly, our 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 $456,000 for the nine months ended September 30, 2000,

- 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 our ability to expatriate profits,

- difficulty in staffing and managing widespread operations, and

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

WE MAY LOSE MONEY WHEN WE EXCHANGE FOREIGN CURRENCY RECEIVED FROM INTERNATIONAL REVENUES INTO U.S. DOLLARS.

For the nine months ended September 30, 2000, approximately 69% of our business was conducted in currencies other than the U.S. dollar, which is our reporting currency. As a result, currency

fluctuations among the U.S. dollar and the currencies in which we do business have caused and will continue to cause foreign currency transaction gains and losses. Currently, we attempt to manage foreign currency risk through the matching of assets and liabilities. In the future, we may undertake to manage foreign currency risk through additional hedging methods. We recognize foreign currency gains or losses arising from our operations in the period incurred. We cannot guarantee that we will be successful in managing foreign currency risk or in predicting the effects of exchange rate fluctuations upon our future operating results because of the number of currencies involved, the variability of currency exposure and the potential volatility of currency exchange rates.

IF WE ENGAGE IN ANY ACQUISITION, WE WILL INCUR A VARIETY OF COSTS, AND MAY NEVER REALIZE THE ANTICIPATED BENEFITS OF THE ACQUISITION.

Our business strategy includes the future acquisition of businesses, technologies, services or products that we believe are a strategic fit with our business. If we do 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 our business. Moreover, we may fail to realize the anticipated benefits of any acquisition. Future acquisitions could reduce your ownership and could cause us to incur debt, expose us to future liabilities and result in amortization expenses related to goodwill and other intangible assets.

IF WE FAIL TO RETAIN OUR KEY PERSONNEL AND HIRE, TRAIN AND RETAIN QUALIFIED EMPLOYEES, WE MAY NOT BE ABLE TO COMPETE EFFECTIVELY, WHICH COULD RESULT IN REDUCED REVENUE.

Our success is highly dependent on the continued services of key management, technical and scientific personnel. Our management and other employees may voluntarily terminate their employment with us at any time upon short notice. The loss of the services of any member of our senior management team, including our Chief Executive Officer, Chane Graziano, and our President, David Green, or any of our technical or scientific staff may significantly delay or prevent the achievement of product development and other business objectives. We maintain key person life insurance on Messrs. Graziano and Green. Our future success will also depend on our ability to identify, recruit and retain additional qualified scientific, technical and managerial personnel. Competition for qualified personnel in the technology area is intense, and we operate 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 information technology, engineering and science and the process of hiring suitably qualified personnel is often lengthy. If we are unable to hire and retain a sufficient number of qualified employees, our ability to conduct and expand our business could be seriously reduced.

WE PLAN SIGNIFICANT GROWTH, AND THERE IS A RISK THAT WE WILL NOT BE ABLE TO MANAGE THIS GROWTH.

Our success will depend on the expansion of our operations. Effective growth management will place increased demands on our management, operational and financial resources. To manage our growth, we must expand our facilities, augment our operational, financial and management systems, and hire and train additional qualified personnel. Our failure to manage this growth effectively could impair our ability to generate revenue or could cause our expenses to increase more rapidly than revenue, resulting in operating losses.

OUR EXISTING STOCKHOLDERS WILL HAVE SUBSTANTIAL INFLUENCE OVER MATTERS REQUIRING A STOCKHOLDER VOTE.

Following the completion of this offering, our current stockholders will beneficially own or control approximately 74% of the outstanding shares of our common stock. If all of these stockholders were to

vote together as a group, they would have the ability to elect our board of directors and control the outcome of stockholder votes, including votes concerning by-law amendments and possible mergers, corporate control contests and other significant corporate transactions. In addition, this concentration of ownership may delay or prevent a change of control of our company at a premium price if these stockholders oppose it. The interests of these stockholders may not always coincide with our interests as a company or the interests of other stockholders.

BECAUSE OUR STOCK PRICE IS LIKELY TO BE HIGHLY VOLATILE, OUR STOCK PRICE COULD EXPERIENCE SUBSTANTIAL DECLINES AND OUR MANAGEMENT'S ATTENTION MAY BE DIVERTED FROM MORE PRODUCTIVE TASKS.

The market price of our common stock is likely to be volatile and could decline, perhaps substantially, following this offering in response to various factors, many of which are beyond our control, including:

- 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,

- conditions or trends in the biotechnology and pharmaceutical industries,

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

- a decrease in the demand for our 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 our common stock, regardless of our 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 us could result in substantial costs, potential liabilities and the diversion of our management's attention and resources.

PROVISIONS OF DELAWARE LAW AND OF OUR CHARTER AND BY-LAWS MAY MAKE A TAKEOVER MORE DIFFICULT WHICH COULD CAUSE OUR STOCK PRICE TO DECLINE.

Provisions in our certificate of incorporation and by-laws 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 our management and board of directors. Public stockholders who might desire to participate in such a transaction may not have an opportunity to do so. We also have a staggered board of directors which 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 our management and board of directors. Such provisions may also limit the price that investors might be willing to pay for shares of our common stock in the future.

FAILURE TO RAISE ADDITIONAL CAPITAL OR GENERATE THE SIGNIFICANT CAPITAL NECESSARY TO EXPAND OUR OPERATIONS AND INVEST IN NEW PRODUCTS COULD REDUCE OUR ABILITY TO COMPETE AND RESULT IN LOWER REVENUE.

We anticipate that our existing capital resources and the net proceeds from this offering will enable us to maintain currently planned operations for at least the next two years. However, we premise this expectation on our current operating plan, which may change as a result of many factors, including market acceptance of our new products and future opportunities with collaborators.

Consequently, we may need additional funding sooner than anticipated. Our inability to raise capital could seriously harm our business and product development efforts.

If we raise additional funds through the sale of equity or convertible debt or equity-linked securities, your percentage ownership in the company will be reduced. In addition, these transactions may dilute the value of our outstanding stock. We may issue securities that have rights, preferences and privileges senior to our common stock. If we raise additional funds through collaborations or licensing arrangements, we may relinquish rights to certain of our technologies or products, or grant licenses to third parties on terms that are unfavorable to us. We may be unable to raise additional funds on terms acceptable to us. If future financing is not available to us or is not available on terms acceptable to us, we may have to curtail or cease operations.

SHARES ELIGIBLE FOR PUBLIC SALE AFTER THIS OFFERING COULD ADVERSELY AFFECT OUR STOCK PRICE.

The market price of our common stock could decline as a result of sales of shares by our existing stockholders after this offering, or the perception that such sales will occur. These sales also might make it difficult for us to sell equity securities in the future at a time and at a price that we deem appropriate. After this offering, we will have 24,782,422 shares of common stock outstanding. Of these shares, all of the shares sold in this offering will be freely tradeable. All of our existing stockholders have executed lock-up agreements. Those lock-up agreements restrict all of our existing stockholders from selling, pledging or otherwise disposing of their shares for a period of 180 days after the date of this prospectus without the prior written consent of Thomas Weisel Partners LLC. However, Thomas Weisel Partners LLC may, in its sole discretion, release all or any portion of the common stock from the restrictions of the lock-up agreements. In addition, after this offering, we also intend to register 3,750,000 shares of common stock for issuance under our 2000 Stock Option and Incentive Plan and 500,000 shares under our Employee Stock Purchase Plan.

WE WILL HAVE BROAD DISCRETION AS TO THE USE OF THE PROCEEDS FROM THIS OFFERING AND MAY USE THE PROCEEDS IN A MANNER WITH WHICH YOU DISAGREE.

Our board of directors and our management will have broad discretion over the use of the net proceeds of this offering. You may disagree with the judgment of our board of directors and our management regarding the application of the proceeds of this offering. We intend to use a majority of the proceeds from this offering for payment of existing debt, redemption of our series A preferred stock, working capital and general corporate purposes and to fund potential acquisitions, if any. Because of the number and variability of factors that determine our use of the net proceeds from this offering, we cannot assure you that our actual use will not vary substantially from our currently planned uses. Initially, we intend to invest the net proceeds from this offering in income producing, investment grade securities.

FUTURE ISSUANCE OF OUR PREFERRED STOCK MAY DILUTE THE RIGHTS OF OUR COMMON STOCKHOLDERS.

Our 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 our stockholders. The rights of the holders of common stock may be adversely affected by the rights of future holders of our preferred stock.

YOU WILL NOT RECEIVE CASH DIVIDENDS ON YOUR INVESTMENT IN OUR COMMON STOCK.

We intend to retain all of our earnings to finance the development and expansion of our business and do not anticipate paying any cash dividends in the foreseeable future. Moreover, our ability to declare and pay cash dividends on our common stock is restricted by covenants in our senior credit

facility and in the indenture governing our senior subordinated notes. As a result, capital appreciation, if any, of our common stock will be your sole source of gain for the foreseeable future.

AN ACTIVE TRADING MARKET FOR OUR COMMON STOCK MAY NOT DEVELOP.

Prior to this offering, there has been no public market for our common stock. Although our common stock will be quoted on the Nasdaq National Market, an active trading market for our shares may not develop or be sustained following this offering. You may not be able to resell your shares at prices equal to or greater than the initial public offering price. The initial public offering price will be determined through negotiations between us and the underwriters and may not be indicative of the market price for these shares following this offering. You should read "Underwriting" for a discussion of the factors to be considered in determining the initial public offering price.

INFORMATION REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements. The forward-looking statements are principally contained in the sections on "Prospectus Summary," "Business" and "Management's Discussion and Analysis of Financial Condition and Results of Operations." These statements involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Forward-looking statements include, but are not limited to:

- our business strategy,
- the market opportunity for our products, including the willingness of our customers to expand proteomics and ADMET investments,
- our plans for hiring additional personnel,
- our estimates regarding our capital requirements and our needs for additional financing, and
- our plans, objectives, expectations and intentions contained in this prospectus that are not historical facts.

In some cases, you can identify forward-looking statements by terms such as "may," "will," "should," "could," "would," "expects," "plans," "anticipates," "believes," "estimates," "projects," "predicts," "intends," "potential" and similar expressions intended to identify forward-looking statements. These statements reflect our current views with respect to future events and are based on assumptions and subject to risks and uncertainties. Given these uncertainties, you should not place undue reliance on these forward-looking statements. We discuss many of these risks in greater detail under the heading "Risk Factors." Also, these forward-looking statements represent our estimates and assumptions only as of the date of this prospectus.

You should read this prospectus completely and with the understanding that our actual future results may be materially different from what we expect. We may not update these forward-looking statements, even though our situation may change in the future, unless we have obligations under the Federal securities laws to update and disclose material developments related to previously disclosed information. We qualify all of our forward-looking statements by these cautionary statements.

USE OF PROCEEDS

We estimate that the net proceeds we will receive from the sale of 6,250,000 shares of common stock will be approximately $68.3 million, or approximately $78.7 million if the underwriters fully exercise their over-allotment option, at the assumed offering price of $12.00 per share, in each case after deducting estimated underwriting discounts, commissions and offering expenses payable by us. We will not receive any proceeds from the sale of shares by our president as a selling stockholder in this offering.

The principal purposes of this offering are as follows:

- to permit us to repay approximately $665,000 in subordinated debt and $9.6 million under our credit facility,

- to permit us to redeem our series A redeemable preferred stock at a cost of approximately $1.5 million,

- to provide us with funds to complete potential acquisitions and enhance our ability to use our common stock as consideration for potential acquisitions,

- to increase our equity capital and facilitate our future access to public equity markets,

- to increase our working capital, and

- to increase funds available for general corporate purposes.

Except for the payment of existing debt and the redemption of preferred stock listed above, the use of proceeds has not been specifically identified or allocated due to the flexible nature of our planning process and the constantly changing nature of our industry. We will retain broad discretion in the allocation and use of the net proceeds of this offering. Pending the uses described above, we intend to invest the remaining net proceeds from this offering in short-term, investment grade, interest-bearing securities.

Our subordinated debt bears interest at an annual rate of 13.0% and matures upon the consummation of this offering. All of the subordinated debt will be retired out of the proceeds of this offering.

Our credit facility consists of two term loans and a revolving credit line. One term loan and the revolving line of credit mature in January 2002. The other term loan matures in June 2004. The interest rate for the credit facility is equal to our lender's base rate plus 1.0%. This interest rate was 10.5% at October 15, 2000. In July 2000, we increased our borrowings under our credit facility by $2.5 million to finance the acquisition of AmiKa Corporation. All of our outstanding indebtedness under our credit facility will be repaid out of the proceeds of this offering.

DIVIDEND POLICY

We have never declared or paid dividends on our common stock in the past and do not intend to pay dividends on our common stock in the foreseeable future. Any future determination to pay dividends will be at the discretion of our board of directors and will depend on our financial condition, results of operations, capital requirements and other factors the board of directors deems relevant. In addition, our existing credit facility does not permit us to pay cash dividends, and any future credit facilities may not permit us to pay cash dividends.

CAPITALIZATION

The following table describes our capitalization as of September 30, 2000:

- on an actual basis assuming the filing of an amended certificate of incorporation to increase the number of authorized shares of common stock,

- on a pro forma basis to give effect to the conversion of all outstanding shares of convertible preferred stock into an aggregate of 955,935 shares of common stock, the exercise of all outstanding warrants for an aggregate of 8,509,905 shares of common stock upon the closing of this offering and the filing of our amended and restated certificate of incorporation prior to the effective date of this offering, and

- on a pro forma as adjusted basis to reflect the sale of 6,250,000 shares of common stock by us in this offering at an assumed initial offering price of $12.00 per share, after deducting estimated underwriting discounts, commissions and offering expenses payable by us and the application of the net proceeds therefrom.

	AS OF SEPTEMBER 30, 2000		
	ACTUAL	PRO FORMA	PRO FORMA AS ADJUSTED
	(IN THOUSANDS, EXCEPT SHARE DATA)		
Series A redeemable preferred stock, par value $0.01 per share; 469,300 shares authorized, issued and outstanding, actual; 469,300 shares authorized, issued and outstanding, pro forma and no shares issued and outstanding pro forma as adjusted	$ 1,500	$ 1,500	$ --
Series B convertible preferred stock, par value $0.01 per share; 48,500 shares authorized, issued and outstanding, actual; no shares authorized, issued and outstanding, pro forma and pro forma as adjusted	1,000	--	--
Total preferred stock	$ 2,500	$ 1,500	--
Common stock warrants	102,115	--	--
Undesignated preferred stock, par value $0.01 per share; 82,200 shares authorized, no shares issued and outstanding, actual; 5,000,000 shares authorized, no shares issued and outstanding, pro forma and pro forma as adjusted	--	--	--
Common stock, par value $0.01 per share; 80,000,000 shares authorized, 13,727,365 shares issued and outstanding, actual; 80,000,000 shares authorized, 23,193,210 shares issued and outstanding pro forma; 80,000,000 shares authorized, 29,443,210 shares issued and outstanding, pro forma as adjusted	137	232	294
Additional paid-in capital	18,132	121,157	189,345
Treasury stock	(668)	(668)	(668)
Notes receivable	(1,548)	(1,548)	(1,548)
Retained earnings (accumulated deficit)	(112,358)	(112,358)	(112,358)
Accumulated other comprehensive income (loss)	(713)	(713)	(713)
Total stockholders' equity	(97,018)	6,102	74,352
Total capitalization	$ 7,597	$ 7,602	$ 74,352

The above table excludes 598,612 shares of common stock issuable upon exercise of stock options outstanding as of September 30, 2000 at a weighted average exercise price of $1.00 per share. The above table also assumes no exercise of the underwriters' over-allotment option.

DILUTION

Our pro forma net tangible book value as of September 30, 2000, was approximately $(3.0) million, or $(0.19) per share of common stock. Pro forma net tangible book value per share represents the amount of our total pro forma tangible assets less total liabilities divided by the pro forma number of shares of common stock outstanding. After giving effect to the issuance and sale by us of 6,250,000 shares of common stock offered by this prospectus at an assumed initial offering price of $12.00 per share and after deducting estimated underwriting discounts, commissions and offering expenses payable by us, our pro forma net tangible book value as of September 30, 2000 would have been $65 million, or $2.63 per share. This represents an immediate increase in the pro forma net tangible book value of $2.82 per share to existing stockholders and an immediate dilution of $9.37 per share to new stockholders in this offering illustrated by the following table:

Assumed initial public offering price per share.....		$ 12.00
Pro forma net tangible book value per share before this offering.....	$(0.19)	
Increase per share attributable to new stockholders.....	2.82	
Pro forma net tangible book value per share after the offering.....		2.63
Dilution per share to new investors.....		$ 9.37

The following table sets forth on a pro forma basis as of September 30, 2000, the number of shares of common stock purchased from us, the total effective cash consideration and the average price per share paid and to be paid by existing and new stockholders before deducting underwriting discounts, commissions and offering expenses payable by us:

	SHARES PURCHASED		TOTAL CONSIDERATION		AVERAGE PRICE PER SHARE
	NUMBER	PERCENT	AMOUNT	PERCENT	
Existing stockholders.....	18,532,422	74.8%	$ 2,558,106	3.3%	$ 0.14
New stockholders.....	6,250,000	25.2	75,000,000	96.7	12.00
Total.....	24,782,422	100.0%	$77,558,106	100.0%	

The foregoing discussion and tables assume no issuance of shares by us pursuant to the underwriters' over-allotment option and no exercise of any stock options outstanding. As of September 30, 2000, there were options outstanding to purchase a total of approximately 598,612 shares of common stock with a weighted average exercise price of $1.00 per share. To the extent that any of these options are exercised, your investment will be further diluted. In addition, we may grant more options in the future under our stock plans.

SELECTED FINANCIAL DATA

You should read the following selected consolidated financial data in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and related notes included elsewhere in this prospectus. The statement of operations data for the years ended December 31, 1997, 1998 and 1999 and for the nine-month period ended September 30, 2000 and the balance sheet data at December 31, 1998 and 1999 and September 30, 2000 are derived from our audited consolidated financial statements appearing elsewhere in this prospectus. The balance sheet data at December 31, 1997 and 1996, and the statement of operations data for the period from March 15, 1996 to December 31, 1996 are derived from our audited consolidated financial statements not included in this prospectus. The statement of operations data for the year ended December 31, 1995 and for the period from January 1, 1996 to March 14, 1996 and the balance sheet data at December 31, 1995 represents data of a predecessor company and are derived from their unaudited consolidated financial statements not included in this prospectus. The interim statement of operations data for the nine-month period ended September 30, 1999 are derived from our unaudited consolidated interim financial statements appearing elsewhere in this prospectus which, in the opinion of management, have been prepared on the same basis as the audited consolidated financial statements and reflect all adjustments necessary for a fair presentation of that data. The data for the nine-month period ended September 30, 2000 are not necessarily indicative of results for the year ending December 31, 2000 or any future period.

	PREDECESSOR COMPANY FISCAL YEAR ENDED DECEMBER 31, 1995	PREDECESSOR COMPANY FOR THE PERIOD FROM JANUARY 1, 1996 TO MARCH 14, 1996	FOR THE PERIOD FROM INCEPTION MARCH 15, 1996 TO DECEMBER 31, 1996
	(UNAUDITED)	(UNAUDITED)	
	(IN THOUSANDS, EXCEPT SHARE AND PER SHARE DATA)		
STATEMENT OF OPERATIONS DATA:			
Revenues	$ 10,032	$ 1,989	$ 8,198
Cost of goods sold	5,286	1,059	4,080
Stock compensation expense	--	--	--
Gross profit	4,746	930	4,118
General and administrative expense	2,435	487	1,834
Marketing and selling expense	1,469	232	1,058
Research and development	348	91	249
Amortization of goodwill	--	--	--
Stock compensation expense	--	--	--
Operating income (loss)	494	120	977
Other (expense) income:			
Foreign currency (loss) gain	23	(4)	108
Common stock warrant interest expense	--	--	--
Interest expense, net	(472)	(90)	(177)
Amortization of deferred financing costs	--	--	--
Other	(85)	(135)	(10)
Other expense, net	(534)	(229)	(79)
(Loss) income before income taxes	(40)	(109)	898
Income taxes	85	--	362
Net (loss) income	$ (125)	$ (109)	$ 536
Preferred stock dividends	--	--	(97)
Net (loss) income available to common shareholders	$ (125)	$ (109)	$ 439
(Loss) income per share:			
Basic	$ (0.01)	$ (0.01)	$ 0.04
Diluted	$ (0.01)	$ (0.01)	$ 0.02
Weighted average common shares:			
Basic	10,259,410	10,259,410	10,259,410
Diluted	10,259,410	10,259,410	20,241,145

FISCAL YEAR ENDED DECEMBER 31,			NINE MONTHS ENDED SEPTEMBER 30,	
1997	1998	1999	1999	2000

(UNAUDITED)
(IN THOUSANDS, EXCEPT SHARE AND PER SHARE DATA)

STATEMENT OF OPERATIONS DATA:					
Revenues	$ 11,464	$ 12,154	$ 26,178	$ 18,470	$ 22,069
Cost of goods sold	5,128	5,351	13,547	9,359	11,462
Stock compensation expense	--	--	--	--	151
Gross profit	6,336	6,803	12,631	9,111	10,456
General and administrative expense	2,338	2,317	4,147	2,927	3,733
Marketing and selling expense	1,672	1,722	2,448	1,842	2,359
Research and development	207	325	1,188	841	1,208
Amortization of goodwill	--	27	368	252	423
Stock compensation expense	--	--	3,284	937	13,181
Operating income (loss)	2,119	2,412	1,196	2,312	(10,448)
Other (expense) income:					
Foreign currency (loss) gain	(96)	21	(48)	61	(456)
Common stock warrant interest expense	(117)	(1,379)	(29,694)	(7,403)	(70,920)
Interest expense, net	(223)	(210)	(657)	(468)	(655)
Amortization of deferred financing costs	--	--	(63)	(44)	(56)
Other	106	10	(17)	(15)	28
Other expense, net	(330)	(1,558)	(30,479)	(7,869)	(72,059)
(Loss) income before income taxes	1,789	854	(29,283)	(5,557)	(82,507)
Income taxes	682	783	137	649	1,354
Net (loss) income	$ 1,107	$ 71	$ (29,420)	$ (6,206)	$ (83,861)
Preferred stock dividends	(122)	(122)	(157)	(115)	(123)
Net (loss) income available to common shareholders	$ 985	$ (51)	$ (29,577)	$ (6,321)	$ (83,984)
(Loss) income per share:					
Basic	$ 0.13	$ (0.01)	$ (5.28)	$ (1.13)	$ (13.11)
Diluted	$ 0.06	$ (0.01)	$ (5.28)	$ (1.13)	$ (13.11)
Weighted average common share					
Basic	7,406,486	5,598,626	5,598,626	5,598,626	6,407,682
Diluted	17,500,194	5,598,626	5,598,626	5,598,626	6,407,682

	AS OF DECEMBER 31,					AS OF
	1995	1996	1997	1998	1999	SEPTEMBER 30, 2000
	(UNAUDITED)					
	(IN THOUSANDS)					
BALANCE SHEET DATA:						
Cash and cash equivalents	$ 1,043	$1,088	$ 707	$ 957	$ 2,396	$ 2,149
Working capital	(4,910)	1,677	1,698	2,205	3,783	1,025
Total assets	11,204	6,397	6,161	7,220	20,610	23,236
Long-term obligations, net of current portion	498	1,112	829	638	5,073	5,730
Preferred stock	--	1,504	1,621	1,500	2,500	2,500
Common stock warrants	--	--	--	1,500	31,194	102,115
Stockholders' equity (deficit)	1,203	516	737	678	(25,711)	(97,018)

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

YOU SHOULD READ THE FOLLOWING DISCUSSION IN CONJUNCTION WITH OUR CONSOLIDATED FINANCIAL STATEMENTS, THE RELATED NOTES AND OTHER FINANCIAL INFORMATION APPEARING ELSEWHERE IN THIS PROSPECTUS.

OVERVIEW

We are a provider of innovative, enabling tools for drug discovery research at pharmaceutical and biotechnology companies, universities and government research laboratories. We focus on two critical bottlenecks in the drug discovery process, proteomics during the target validation stage of the drug discovery process and ADMET screening during the secondary screening stage of the drug discovery process. Our proteomics products consist of tools that allow our customers to purify and analyze proteins. Our ADMET screening products are tools that enable our customers to test drug candidates to determine their absorption, distribution, metabolism, elimination and toxicology properties prior to conducting costly clinical trials.

In providing tools for drug discovery generally, we have established a significant base business and have achieved brand recognition through our sale of precision pumps, ventilators and tissue/organ systems. Since our reorganization in 1996, we have built upon our base business and brand recognition by adding new technologies within the areas of proteomics and ADMET screening. Specifically, we have acquired the following product lines, businesses and technologies:

- In June 1998, we acquired products for cell injection systems from Medical Systems Corporation for $1.0 million in cash,

- In March 1999, we acquired Biochrom, which develops and manufactures DNA/RNA/protein calculators, spectrophotometers, amino acid analyzers and related consumables in the United Kingdom, from Pharmacia Biotech (Biochrom) Ltd for $7.0 million in cash,

- In March 1999, we entered into an exclusive license for the technology underlying our ScanTox in vitro toxicology testing product for $25,000 in cash and ongoing royalties and licensing fee payments,

- In September 1999, we acquired products for intracellular research from Clark Electromedical Instruments for $349,000 in cash,

- In November 1999, we acquired our NaviCyte diffusion chamber systems product for drug absorption testing from a subsidiary of Trega Biosciences for $390,000 in cash and future royalties,

- In November 1999, we acquired substantially all the assets and certain liabilities of Hugo Sachs Elektronik, consisting primarily of products for organ testing, for $568,000 in cash,

- In May 2000, we acquired certain assets of Biotronik, consisting primarily of products for amino acid analysis, for $469,000 in cash, and

- In July 2000, we acquired substantially all the assets of AmiKa Corporation consisting of purification tips, spin columns, a 96 well drug binding assay and related technology and intellectual property for $3.1 million in cash.

We have also entered into a non-binding letter of intent to acquire substantially all the assets and certain liabilities of a company that produces tools for toxicity testing. The non-binding letter of intent provides for an initial cash payment of $200,000, a second cash payment of $100,000 approximately one month following the initial cash payment and additional contingent payments and royalty payments based on future sales of the acquired products. This non-binding letter of intent will expire on

December 15, 2000. We are working to complete this acquisition by that date although we cannot be certain that this acquisition will be completed by that date or at all.

REVENUES. We generate revenues by selling instruments, devices and consumables through our catalog, our distributors and our website. Every two to three years, we intend to distribute a new, comprehensive catalog initially in a series of bulk mailings, first to our existing customers, followed by mailings to targeted markets of potential customers. Distribution will then made periodically to potential and existing customers through direct mail and trade shows and in response to telephone inquiries over the life of this catalog. From time to time, we also intend to distribute catalog supplements that promote selected areas of our catalog or new products to targeted subsets of our customer base. Future distributions of our comprehensive catalog and our catalog supplements will be determined primarily by the incidence of new product introductions, which cannot be predicted. Our customers are end user research scientists at pharmaceutical and biotechnology companies, universities and government laboratories. Revenue from catalog sales in any period is a function of time elapsed since the last mailing of the catalog, the number of catalogs mailed and the number of new items included in the catalog. Catalog sales tend to increase immediately following a mailing and level off or decline slightly from the increased level until the next mailing, which repeats the cycle. For the nine months ended September 30, 2000, approximately 82% of our revenues were derived from products we manufacture. The remaining 18% of our revenues were derived from complementary products we distribute in order to provide researchers with a single source for all equipment needed to conduct a particular experiment. Approximately one-half of our revenues are derived through catalog sales and through reference to our website, which is an electronic version of our catalog. We do not currently have the capability to accept purchase orders through our website. For the nine months ended September 30, 2000, approximately 69% of our revenues were derived from sales made by our non-U.S. operations. A majority of our international sales during this period consisted of sales to Amersham Pharmacia Biotech, the distributor for our spectrophotometers and amino acid analyzers. Amersham Pharmacia Biotech distributes these products to customers around the world from its distribution center in Upsalla, Sweden, including to many customers located in the United States. As a result, we believe our international sales would have been less as a percentage of our revenues for the nine months ended September 30, 2000 than indicated above if we had shipped our products directly to their end users.

COST OF GOODS SOLD. Cost of goods sold includes material, labor and manufacturing overhead costs, obsolescence charges, packaging costs, warranty costs, shipping charges and royalties. Our costs of goods sold may vary over time based on the mix of products sold. We sell products that we manufacture and products that we purchase from third parties. The products that we purchase from third parties have lower margins because the profit is effectively shared with the original manufacturer. For the nine months ended September 30, 2000, our manufactured products had lower cost of goods sold. We anticipate that our manufactured products will continue to have a lower cost of goods sold for the forseeable future.

GENERAL AND ADMINISTRATIVE EXPENSE. General and administrative expense consists primarily of salaries and other related costs for personnel in executive, finance, accounting, information technology and human relations functions. Other costs include facility costs, professional fees for legal and accounting services, and provision for doubtful accounts.

SALES AND MARKETING EXPENSE. Sales and marketing expense consists primarily of salaries and related expenses for personnel in sales, marketing and customer support functions. We also incur costs for trade shows, demonstration equipment, public relations and marketing materials, consisting primarily of the printing and distribution of our 1,000 page catalog and the maintenance of our web site. We may from time to time in the future expand our marketing efforts by employing additional

technical marketing specialists in an effort to increase sales of selected categories of products in our catalog.

RESEARCH AND DEVELOPMENT EXPENSE. Research and development expense consists primarily of salaries and related expenses for personnel and capital resources used to develop and enhance our products. Other research and development expense includes fees paid to consultants and outside service providers, and material costs for prototype and test units. We expense research and development costs as incurred. We believe that significant investment in product development is a competitive necessity and plan to continue this investment in order to realize the potential of our new technologies for proteomics and ADMET.

STOCK COMPENSATION EXPENSE. Stock compensation resulting from stock option grants to our employees represents the difference between the fair market value and the exercise price of the stock options on the date the stock options were granted for those options that are considered fixed awards. Stock compensation expense is also recorded for stock option grants that were considered variable awards as the number of shares to be acquired by employees was indeterminable at the date of grant. Deferred compensation on fixed awards is amortized as a charge to operations over the vesting period of the options. Based on grants in 2000, we incurred deferred compensation of $9.9 million and recognized deferred compensation expense of $3.3 million for the nine months ended September 30, 2000.

Since our reorganization in 1996, we have experienced substantial revenue growth. In the future we intend to introduce new products for proteomics and ADMET research that support emerging and potentially large markets. In order to support the anticipated growth of these new products, we may expand our product development and sales and marketing activities. In the event we pursue activities which increase our product development and sales and marketing expenses, operating results will be adversely affected if revenues do not increase proportionately. If revenues are below expectations, our business, operating results and financial condition are likely to be materially and adversely affected. Net income may be disproportionately affected by a reduction in revenues as a relatively smaller amount of our expenses vary with changes in our revenues. As a result, we believe that period-to-period comparisons of our results of operations are not necessarily meaningful and should not be relied upon as indications of future performance.

NINE MONTHS ENDED SEPTEMBER 30, 2000 COMPARED TO NINE MONTHS ENDED SEPTEMBER 30, 1999

REVENUES. Revenues increased $3.6 million, or 20%, to $22.1 million in 2000 from $18.5 million in 1999. Excluding the impact of changes in foreign currency exchange rates, revenues based on 1999 rates would have been approximately $22.8 million in 2000. Approximately $1.1 million of the $3.6 million increase, or 31%, was attributable to the full period effect of revenues from the acquisition of our Biochrom subsidiary in March 1999 net of exchange rate effects of $508,000. The balance of the increase was attributable to $2.5 million of revenue from product line acquisitions made in the second half of 1999 partially offset by the cyclical nature of catalog sales of traditional products. During the year preceding the mailing of a new catalog in April 2000, traditional products were not promoted because we were concentrating on the acquisition of new products or businesses as well as the development of the new catalog to include these newly acquired products. This new catalog was the first new, comprehensive catalog produced since April 1997.

COST OF GOODS SOLD. Cost of goods sold increased $2.1 million, or 23%, to $11.5 million in 2000 from $9.4 million in 1999. The increase in cost of goods sold as a percentage of revenues was due to slightly higher cost of goods sold on acquired product lines and for our Biochrom subsidiary acquired in March 1999. Our Biochrom subsidiary experiences lower revenues and correspondingly lower general and administration and sales and marketing expenses relative to cost of goods sold as a consequence of marketing its products primarily through a distributor.

GENERAL AND ADMINISTRATIVE EXPENSE. General and administrative expense increased $807,000, or 28%, to $3.7 million in 2000 from $2.9 million in 1999 due primarily to the full period effect of Biochrom as well as increased support for operations.

SALES AND MARKETING EXPENSE. Sales and marketing expense increased $517,000, or 28%, to $2.4 million in 2000 from $1.8 million in 1999. The increase was primarily due to expenses of acquisitions as well as the addition of marketing personnel and additional catalog costs. As a percentage of revenues, marketing and sales expense was 11% in 2000 and 10% in 1999. This increasing percentage reflects the addition of marketing personnel to promote newly acquired technology. In the future we may add employees to expand selected categories of our catalog as well as to expand the capabilities of our web site and integrate it into our business planning and processes.

RESEARCH AND DEVELOPMENT EXPENSE. Research and development spending increased $367,000, or 44%, to $1.2 million in 2000 from $841,000 in 1999. The increase in research and development expense resulted from expenses of acquisitions, spending on product enhancement and new product development, primarily on ScanTox in vitro toxicology testing and other core technology. As a percentage of revenues, research and development expense was 6% in 2000 and 5% in 1999. This increasing percentage reflects expanded efforts on ADMET testing products.

STOCK COMPENSATION EXPENSE. We recorded $13.3 million of stock compensation expense in the nine months ended September 30, 2000. In connection with the grant of stock options to employees in 2000, we recorded deferred compensation of approximately $3.3 million and will recognize approximately $6.6 million of additional expense over the remaining vesting life of the options. In addition, in the third quarter of 2000, we also recorded $10.0 million of stock compensation expense in connection with options granted in 1996 and 1999. In 1999, we recorded $937,000 of stock compensation expense related to these 1996 and 1999 option grants.

AMORTIZATION OF GOODWILL. Amortization of goodwill was $423,000 in 2000 and $252,000 in 1999. The increase is the result of amortizing additional goodwill incurred in connection with our acquisitions in 2000.

OTHER EXPENSE, NET. Other expense, net, was $72.1 million in 2000 compared to $7.9 million in 1999. Other expense, net, included a non-cash charge for common stock warrant interest expense of $70.9 million in 2000 and $7.4 million in 1999. This amount represents the difference between the fair value of the warrant for financial reporting purposes and its exercise price. This liability represents the right of warrant holders to require us to pay cash equal to the fair market value of the warrants in exchange for the warrants, or any common stock from the exercise of the warrants, beginning March 15, 2002. Effective with this offering, the warrants will be exercised for common stock and the right to be paid cash will terminate. The liability previously recorded will become part of common stock and additional-paid-in capital, and no additional liability will be incurred with respect to these warrants. Net interest expense increased $186,000, or 40%, to $655,000 in 2000 from $468,000 in 1999. The increase resulted primarily from higher debt balances in 2000, which were incurred to finance acquisitions.

INCOME TAXES. The Company's effective income tax rates were 39% for 2000 and 33% for 1999 notwithstanding the impacts for common stock warrant interest expense and stock compensation expense in excess of allowable tax benefits on exercise of options, which are not deductible for income tax purposes. The increase in the rate is principally due to certain blended higher foreign statutory jurisdiction income tax rates. The effective income tax rates may change compared to the remainder of each respective calendar year if operating results differ significantly from the interim results.

YEAR ENDED DECEMBER 31, 1999 COMPARED TO YEAR ENDED DECEMBER 31, 1998

REVENUES. Revenues increased $14.0 million, or 115%, to $26.2 million in 1999 from $12.2 million in 1998. Approximately $12.2 million, or 87%, of the increase was derived from the March 1999 acquisition of Biochrom. Excluding the impact of changes in foreign currency exchange rates, revenues based on 1998 rates would have been approximately $26.3 million in 1999. Revenues from our existing business increased $1.8 million, or 15%, to $14.0 million in 1999 from $12.2 million in 1998. The increase was attributable to full year revenues of $570,000 from the products acquired from Medical Systems in June 1998, increased sales resulting from our expanded direct marketing efforts on traditional products of $884,000, which included hiring additional marketing staff, producing a CD-ROM of our catalog, and creating and installing an electronic version of our catalog on our website, with the balance due to revenues from product lines acquired in the second half of 1999.

COST OF GOODS SOLD. Cost of goods sold increased $8.2 million, or 153%, to $13.5 million in 1999 from $5.4 million in 1998. As a percentage of revenues, cost of goods sold increased to 52% in 1999 from 44% in 1998. The increase in cost of goods sold in 1999 was primarily the result of the acquisition of Biochrom. The percentage increase was also the result of Biochrom, which experiences higher costs of goods sold as a percentage of revenues due to the marketing of its products primarily through a distributor, which receives a discount to the list price that is calculated to cover the distributor's costs and profits.

GENERAL AND ADMINISTRATIVE EXPENSE. General and administration expense increased $5.1 million, or 221%, to $7.4 million in 1999 from $2.3 million in 1998. Biochrom accounted for $1.1 million, or 22%, of the increase. Also in 1999, $3.3 million was recorded as non-cash compensation expense from options granted in 1996. Excluding the Biochrom acquisition and the compensation expense, expenses increased $800,000, or 35%, to $3.1 million in 1999 from $2.3 million in 1998. The increase was due to the need to support expanding operations. As a percentage of revenues, general and administration expense increased to 28% in 1999 from 19% in 1998.

SALES AND MARKETING EXPENSE. Sales and marketing expense increased $727,000, or 42%, to $2.4 million in 1999 from $1.7 million in 1998. Biochrom accounted for $608,000, or 84%, of the increase. Excluding the Biochrom acquisition, expenses increased $119,000, or 7%, to $1.8 million in 1999 from $1.7 million in 1998. The increase was due to expanded direct marketing efforts and the full year effect of support for the products acquired in June 1998. As a percentage of revenues, sales and marketing expense decreased to 9% in 1999 from 14% in 1998. The decrease in sales and marketing expense as a percentage of revenues was primarily due to the acquisition of Biochrom, which has lower sales and marketing expense because those expenses are primarily borne by its distributor.

RESEARCH AND DEVELOPMENT EXPENSE. Research and development spending increased $863,000 in 1999, or 266%, to $1.2 million from $325,000 in 1998. The acquisition of Biochrom contributed $577,000 to the increase. The balance of the increase was spending for development of our newly licensed ScanTox technology and expansion of our core drug screening products. As a percentage of revenues, research and development expense increased to 5% in 1999 from 3% in 1998. The increase in research and development expense as a percentage of revenues was primarily due to Biochrom, our employment of additional engineers and increased charges for outside services.

AMORTIZATION OF GOODWILL. Amortization of goodwill was $368,000 in 1999 and $28,000 in 1998. The increase is the result of amortizing additional goodwill incurred in connection with our acquisitions in 1999 and the full year effect of the acquisition of the Medical Systems products in June 1998.

OTHER EXPENSE, NET. Other expense, net was $30.5 million in 1999 compared to $1.6 million in 1998. Other expense, net, included a non-cash charge for common stock warrant interest expense of $29.7 million in 1999 and $1.4 million in 1998. Net interest expense increased $447,000, or 214%, to

$656,000 in 1999 from $209,000 in 1999. The increase resulted primarily from higher debt balances in 1999, which were incurred to finance acquisitions.

INCOME TAXES. The Company's effective income tax rates were 33% for 1999 and 35% for 1998 notwithstanding the impact for common stock warrant interest expense which is not deductible for income tax purposes. The decrease in the rate is principally due to certain lower foreign statutory jurisdiction income tax rates, specifically the result of the acquisition of a United Kingdom subsidiary.

YEAR ENDED DECEMBER 31, 1998 COMPARED TO YEAR ENDED DECEMBER 31, 1997

REVENUES. Revenues increased $690,000, or 6%, to $12.2 million in 1998, from $11.5 million in 1997. The increase was due to the introduction of new products from the acquisition of Medical Systems in June 1998, which accounted for $510,000 of the increase, as well as growth in sales of existing products, primarily due to the issuance of two catalog supplements in 1998 compared to one supplement issued in 1997.

COST OF GOODS SOLD. Cost of goods sold increased approximately $224,000, or 4%, to $5.4 million in 1998 from $5.1 million in 1997. As a percentage of revenues, cost of goods sold decreased to 44% in 1998 from 45% in 1997. The decrease was due to spreading manufacturing overhead across increased production relating to the products acquired with the purchase of Medical Systems.

GENERAL AND ADMINISTRATIVE EXPENSE. General and administrative expense remained constant at $2.3 million from 1997 to 1998. As a percentage of revenues, general and administrative expense decreased to 19% in 1998 from 20% in 1997. The decrease in general and administrative expense as a percentage of revenues was primarily due to spreading general and administrative costs over a greater revenue base.

SALES AND MARKETING EXPENSE. Sales and marketing expense increased $49,000, or 3%, to $1.7 million in 1998 from $1.7 million in 1997. As a percentage of revenues, sales and marketing expense decreased to 14% in 1998 from 15% in 1997. The decrease in sales and marketing expense as a percentage of revenues was primarily due to spreading sales and marketing costs over a greater revenue base.

RESEARCH AND DEVELOPMENT EXPENSE. Research and development spending increased $118,000, or 57%, to $325,000 in 1998 from $206,000 in 1997. The increase in spending represented investments in product development and enhancement of the existing family of products. As a percentage of revenues, research and development expense increased to 3% in 1998 from 2% in 1997.

AMORTIZATION OF GOODWILL. Amortization of goodwill consisted of a charge of $28,000 in 1998 resulting from the acquisition of Medical Systems. There was no corresponding charge in 1997.

OTHER EXPENSES, NET. Other expenses, net were $1.6 million in 1998 compared to $330,000 in 1997. The increase was due primarily to a charge of $1.4 million for common stock warrant interest expense.

INCOME TAXES. The Company's effective income tax rates were 35% for 1998 and 36% for 1997 notwithstanding the impact for common stock warrant interest expense which is not deductible for income tax purposes. The change in the tax rate is principally due to certain tax rates in foreign jurisdictions.

LIQUIDITY AND CAPITAL RESOURCES

Historically, we have financed our business through cash provided by operating activities, the issuance of common and preferred stock, and bank borrowings. Our liquidity requirements have arisen primarily from investing activities, including funding of acquisitions, payments on outstanding indebtedness, research and development expenditures, and capital expenditures. As of September 30,

2000, we had cash of $2.1 million. Since our reorganization in March 1996, we have raised $14.2 million, consisting of $2.5 million of preferred and common stock and $11.7 million of debt. As of September 30, 2000, we had $6.8 million in debt under a bank term loan, $478,000 in subordinated debt and $3.1 million outstanding under a $3.8 million revolving credit facility.

Our operating activities generated cash of $2.0 million in the first nine months of 2000, $2.9 million in fiscal 1999, $1.8 million in fiscal 1998 and $1.1 million in fiscal 1997. For all periods presented, operating cash flows were primarily due to operating results, including the full-year effect of acquisitions prior to non-cash charges, partially offset by working capital requirements. Working capital requirements were affected by acquisitions, which increased accounts receivable and inventory carrying amounts partially offset by increased amounts in accounts payable and accrued expenses.

Our investing activities used cash of $4.7 million in the first nine months of 2000, $8.5 million in fiscal 1999, $1.4 million in fiscal 1998 and $653,000 in fiscal 1997. Cash has been used in the following technology and business acquisitions:

- $469,000 for Biotronik's amino acid analysis systems business in May 2000,

- $390,000 for the NaviCyte diffusion chamber systems product line in November 1999,

- $568,000 for Hugo Sachs Elektronik in November 1999,

- $349,000 for intracellular research products from Clark Electromedical Instruments in September 1999,

- $7.0 million for Biochrom in March 1999,

- $1.0 million for Medical Systems Corporation's cell injection systems business in June 1998, and

- $3.1 million for substantially all the assets of AmiKa Corporation in July 2000.

Our financing activities provided cash of $2.5 million for the first nine months of 2000 and $7.0 million in fiscal 1999, and used cash of $105,000 in fiscal 1998 and $874,000 in fiscal 1997. Financing cash flows consisted of borrowings under a revolving credit facility, long-term debt and the issuance of preferred stock. As of September 30, 2000, we had approximately $600,000 available under our revolving credit facility, subject to our ability to maintain compliance with all of the covenants contained in our revolving credit agreement. We were not in compliance with the net income covenants as of September 30, 2000 due to non-cash stock compensation and imputed interest on warrants. Our credit facility was amended to exclude the accounting treatment for stock option compensation and warrant interest expense. This amendment brought us into compliance with our credit facility and we are currently in compliance with all of the covenants in our credit facility.

Prior to 1999, we had historically generated sufficient cash flow from operations to fund expenditures on capital equipment, debt service, equity transactions, stock repurchases and preferred dividend payments. In 1999, in connection with the acquisition of Biochrom, we increased our long-term indebtedness by approximately $5.5 million and issued approximately $1.0 million in convertible preferred stock. As a result, the level of debt service required increased substantially compared to historical levels. Upon completion of the offering, we intend to use a portion of the proceeds to redeem our series A redeemable preferred stock in the amount of $1.5 million, and to repay the bank term loan, the subordinated debt and the revolving credit facility.

Based on our operating plans, we expect that proceeds from this offering, available cash, cash generated from operations, and cash available from our revolving credit facility will be sufficient to finance operations and capital expenditures for at least two years from the date of this prospectus. However, we may use a substantial portion of the proceeds from this offering to accelerate product development, expand our sales and marketing activities or consummate acquisitions, although we have no current plans in this regard. Therefore, we may need to raise additional capital, which may be

dilutive to existing stockholders. The additional capital may not be available on acceptable terms or at all. Accordingly, there can be no assurance that we will be successful in raising additional capital.

IMPACT OF FOREIGN CURRENCIES

We sell our products in many countries and a substantial portion of our sales, costs and expenses are denominated in foreign currencies, especially the United Kingdom pound sterling and the Euro. In the first nine months of 2000 and in 1999, the U.S. dollar strengthened against these currencies resulting in reduced consolidated revenue growth, as expressed in U.S. dollars. In addition, the currency fluctuations resulted in foreign currency losses of approximately $48,000 in 1999 and $456,000 in the first nine months of 2000.

Historically, we have not hedged our foreign currency position. Currently, we attempt to manage foreign currency risk through the matching of assets and liabilities. However, as our sales expand internationally, we plan to evaluate our currency risks and we may enter into foreign exchange contracts from time to time to mitigate foreign currency exposure.

BACKLOG

Our order backlog was approximately $2.7 million as of September 30, 2000 and $2.1 million as of September 30, 1999. We include in backlog only those orders for which we have received valid purchase orders. Purchase orders may be cancelled at any time prior to shipment. Our backlog as of any particular date may not be representative of actual sales for any succeeding period. We expect to ship substantially all of the September 30, 2000 backlog by December 31, 2000.

ACCOUNTING PRONOUNCEMENTS

In June 1998, the Financial Accounting Standard Board issued Statement of Financial Accounting Standards (SFAS) No. 133, "Accounting for Derivative Instruments and Hedging Activities." SFAS 133 establishes accounting and reporting standards requiring that every derivative instrument be recorded in the balance sheet as either an asset or liability measured at its fair value. SFAS 133, as amended by SFAS 137 and SFAS 138, is effective for years beginning after June 15, 2000. SFAS 133 will be adopted on January 1, 2001. We believe the adoption of this statement will not have a significant impact on our financial position, results of operations or cash flows.

QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Interest rate risk and foreign currency rate risk are the primary sources of market risk to our operations. As of September 30, 2000, we had aggregate variable rate long-term debt of $6.8 million and revolving credit facility debt of $3.2 million. A 10% change in interest rates, from 10.5% to 11.55%, would change the annual interest expense on our long-term debt by approximately $71,400 and on our revolving credit facility by approximately $33,600.

OVERVIEW

We are a global provider of innovative, research enabling tools for drug discovery. We provide a broad array of tools designed to accelerate the speed and to reduce the cost at which our customers can introduce new drugs. Since our 1996 reorganization, we have focused on alleviating the protein purification and ADMET screening bottlenecks in drug discovery.

To address these two critical bottlenecks in protein purification and ADMET screening, we recently introduced several new proprietary tools. For protein purification, these tools include specially treated pipette tips, spin columns and micro-dialyzers. For ADMET screening, these tools include NaviCyte diffusion chambers for drug absorption testing, 96 well equilibrium dialysis plates for drug distribution testing and ScanTox in vitro toxicology screening instruments.

We also have an established product base in proteomics, which is the study of gene function through the analysis of protein interactions. This product base consists of DNA/RNA/protein calculators, life science spectrophotometers and amino acid analysis systems, as well as precision infusion pumps, organ testing systems and ventilators used in ADMET screening.

OUR HISTORY

Our business began in 1901 and has grown over the intervening years with the development and evolution of modern drug discovery tools. Our past inventions include the mechanical syringe pump in the 1950s for drug infusion and the microprocessor controlled syringe pump in the 1980s.

In March 1996, a group of investors led by our current management team acquired a majority of the then existing business of our predecessor, Harvard Apparatus. Following this acquisition, we redirected our strategy to focus on high growth areas within drug discovery by acquiring innovative technologies through strategic acquisitions and licensing while continuing to grow our existing business through internal product development and marketing. We have completed five business acquisitions, including Biochrom, the licensing of key new technology for in vitro toxicology assays and drug absorption measurement chambers, the internal development of new product lines, including new generation syringe pumps and DNA/RNA/protein calculators and the mailing of expanded new catalogs.

INDUSTRY OVERVIEW

The life sciences research industry is undergoing fundamental change and growth resulting principally from the explosive growth in gene discovery and the demand for greater efficiency in the drug discovery process. Industry experts estimate that in 2000, the life sciences research industry will spend more than $50 billion on drug discovery research and development. The goal of drug discovery is to find compounds that will bind specifically to a given target without significantly affecting any other molecules in the body. Traditionally, chemists have laboriously synthesized new compounds with potential therapeutic activity one at a time or painstakingly isolated them from natural resources. Today, combinatorial chemistry techniques are used to greatly increase the supply and diversity of such compounds. Libraries of hundreds of thousands, or even millions, of compounds are now available for testing in biological assays against targets.

Until recently, life sciences researchers had identified only a few hundred targets against which to test these compounds. Driven by large-scale DNA sequencing projects, such as the Human Genome Project, life sciences researchers expect to identify tens of thousands of new genes as they decipher the genomes of both humans and disease-causing organisms. When a gene, which is a segment of DNA, is expressed, a copy of the gene sequence is carried in messenger RNA, or mRNA, which is used to direct the manufacture of a protein. Although genes, DNA, mRNA and proteins are all targets for

drug discovery, proteins are by far the most common. Proteins are the molecular machines of the cell that are responsible for performing the majority of cellular functions. Once proteins are identified and validated as potential targets, they need to be screened against hundreds of thousands, if not millions, of compounds in a process known as primary screening.

Drug discovery is a time-consuming and costly process. In the pre-genomics era, the compound development, primary screening and clinical trials stages were bottlenecks in this process. The successes of genomics, combinatorial chemistry and high throughput screening in recent years have alleviated the bottlenecks at the compound development and primary screening stages. However, these bottlenecks have been replaced by bottlenecks at the target validation, assay development and absorption, distribution, metabolism, elimination and toxicology, or ADMET, testing stages. The revolution in genomics is expected to increase the number of targets from 500 to 10,000, which will consequently greatly increase the need for protein purification and analysis. The increase in the number of compounds in libraries from tens of thousands to millions together with the increase in the number of targets is greatly increasing the number of leads requiring ADMET screening.

THE DRUG DISCOVERY PROCESS

The drug discovery process consists of several steps, which are illustrated below.

The diagram that illustrates the drug discovery process is initially split into two parallel tracks which merge into a single track as the diagram moves to the right. The upper track of the diagram is titled "Compound Development" and includes an arrow titled "Compound Libraries." Below the arrow are the words "Combinatorial Chemistry." The lower track of the diagram is titled "Target Discovery" and includes two arrows. The first arrow is titled "Target Identification." Below this arrow is the word "Genomics." The next arrow to the right is titled "Target Validation." Below this arrow is the word "Proteomics." Following the "Compound Libraries" arrow on the upper track and the "Target Validation" arrow on the lower track, the two tracks of the diagram combine and include arrows to illustrate the remaining stages and key bottlenecks in the drug discovery process. The individual arrows from left to right include an arrow titled "Assay Development" followed by an arrow titled "High Throughput Screening." These two arrows in the diagram appear under the title "Primary Screening." To the right of the "High Throughput Screening" arrow is an arrow titled "Lead Optimization" followed by an arrow titled "ADMET Screening." These two arrows in the diagram appear under the title "Secondary Screening." To the right of the "ADMET Screening" arrow is an arrow titled "Clinical Trials," the final arrow in the process flow diagram.

TARGET IDENTIFICATION involves isolating a particular molecule, typically a protein, and evaluating the role that it plays in the body to determine whether it might be a viable target for further investigation. Today, this activity is most often initiated by genomics studies, including DNA sequencing, RNA analysis and genetic mapping.

TARGET VALIDATION involves demonstrating that affecting the function of a particular target has a positive effect on the course of a disease. Target validation employs a variety of methods including RNA analysis, protein analysis and cell biology. Target validation is a more time-consuming process than target identification.

PRIMARY SCREENING involves the large-scale testing of collections of chemical compounds, known as compound libraries, against validated targets. These libraries are tested using high throughput assays. The goal is to find individual compounds that bind to and inhibit or activate a particular target, commonly referred to as a hit. An assay, in the context of screening compounds against a new target, refers to a test a researcher must develop for measuring whether particular compounds in a library interact with the target in a certain manner. An assay must be developed for each target to be screened. The major pharmaceutical companies are moving towards screening up to 100 targets annually with libraries of up to one million compounds each.

SECONDARY SCREENING involves the refinement of hits into leads that can be used in clinical trials. This step consists of lead optimization and ADMET testing. Lead optimization involves conducting successive rounds of chemical alterations and biological tests to find compounds similar to the original compound identified in primary screening which have improved drug properties over the initial compound, particularly efficacy. ADMET testing involves the conducting of various tests on compounds

to ensure that they are safe and have good pharmacological properties such as high adsorption into the blood from the digestive tract and good distribution to the site of the target molecule in the body. This stage also involves the testing of compounds to determine therapeutic activity in animal models of disease and to ensure that the compounds can be manufactured with consistent quality.

CLINICAL TRIALS involve the testing of pharmaceutical compounds in humans to demonstrate their safety and efficacy. Because clinical trials are by far the most expensive part of drug discovery, and undesirable ADMET properties are the most common reasons for failure, pharmaceutical and biotechnology companies can achieve substantial cost savings by identifying drug candidates with poor ADMET properties as early in the drug discovery process as possible. Drugs with successful clinical trials are almost always commercialized.

PROTEOMICS

Proteomics involves the large-scale purification, identification and analysis of proteins. Proteins are manufactured in the body's cells according to the code contained in DNA and are the molecular machines of the cell that are responsible for performing the majority of cellular functions. Proteins are the most common targets in the field of drug discovery because proteins tend to be far more accessible to drugs than either DNA or mRNA which are located in the nucleus of the cell.

Every protein that is identified as a potential target must be analyzed. The trend in protein analysis currently is moving towards the use of mass spectrometry, which is the fastest and most accurate technique for protein analysis. Because mass spectrometers are highly sensitive, they require the use of pure samples in order to properly analyze the protein. Thus, protein purification, the removal of reagents such as salts, detergents and buffers, is essential to target discovery.

In the last few years the revolution in genomics and the completion of the Human Genome Project has vastly increased the number of known targets. Before the Human Genome Project there were only approximately 500 known targets. Some experts believe that the sequencing of the human genome will ultimately lead to the identification of 50,000 to 100,000 genes and over 1,000,000 proteins. Many scientists expect that this will in turn lead to the identification of up to 10,000 targets. Each of these targets, many of which will be proteins, will need to be purified and analyzed many times prior to becoming a validated target for primary screening. As a result of the recent and projected increases in the number of known drug targets, purifying protein samples has been and will continue to be a significant bottleneck in the drug discovery process.

ADMET SCREENING

The goal of ADMET screening is to identify compounds that have toxic side effects or undesirable pharmacological properties. These compounds are then either eliminated or further chemically modified and re-screened. While ADMET screening is traditionally conducted late in the drug discovery process, early application of ADMET screening can be highly beneficial. This is because more than half of the 90% of lead compounds which fail in the costly clinical trial stage of drug discovery fail due to poor pharmacological properties. These important pharmacological properties consist of absorption, distribution, metabolism and elimination which, together with toxicology, are described below:

ABSORPTION. Absorption describes the ability of a drug to pass through the wall of the digestive tract and enter the blood stream. Absorption is an important property of an effective drug because adequate absorption allows a drug to be administered orally rather than by direct injection into the blood. If a lead candidate cannot be absorbed easily from the digestive tract into the blood, its commercial viability will be adversely impacted even if it effectively acts against the target.

DISTRIBUTION. Distribution describes the amount of a drug that different tissues in the body take in from the blood. Distribution of the drug to the tissue containing the target molecule is necessary for the drug to have the desired effect. Moreover, undesirable side effects may occur if the drug is distributed to tissues other than the one containing the target molecule. Effective distribution requires the drug to be transported around the body and released into the tissue containing the target molecule at an appropriate rate. The flow of blood alone is often an effective distribution method. However, while the binding of a drug to blood proteins can increase the proper distribution of a drug, it can cause toxic problems if the bond formed is too strong.

METABOLISM. Metabolism describes the chemical changes that the body makes to a drug. This is an important property of an effective drug for three reasons. First, some drugs must be metabolized in order to become effective. Second, some drugs may have no toxic side effects, but the byproducts of their metabolism, known as metabolites, may be toxic. Third, metabolism usually makes drugs more soluble in water, which in turn makes it easier for the body to eliminate them in the urine.

ELIMINATION. Elimination describes the process by which the body expels a drug. If the blood absorbs a drug, it will be primarily eliminated in the urine either in its native or metabolized forms. Elimination is important because toxicity is primarily a matter of concentration--even common compounds such as aspirin and caffeine are toxic at high enough concentrations. If the body does not eliminate a drug, the drug's concentration will build up with every dose taken, eventually reaching toxic levels.

TOXICOLOGY. Toxicology describes the adverse effects a drug has on the body. These range from nausea to death. All drugs must be shown to be safe to the satisfaction of regulatory authorities prior to commercialization. Toxicology consists of tests designed to determine the likelihood that a drug will cause death or the growth of tumors, disrupt normal reproductive function or the immune system or mutate DNA.

For every 1,000 hits identified through primary screening, only about ten survive secondary screening and make it into clinical trials, the final stage of drug discovery. Of those ten, only one, on average, survives the regulatory process to be commercialized as a new drug.

CURRENT TECHNOLOGIES FOR PROTEIN PURIFICATION AND ADMET SCREENING

PROTEIN PURIFICATION. Protein purification is an essential step in proteomics. Researchers must remove any salts, buffers, detergents and cellular debris prior to analyzing a protein sample. Current technologies for protein purification include packed bed columns and dialysis. In order to isolate a specific protein, two-dimensional gel electrophoresis, or 2DGE, is typically used in advance of running a sample through a packed bed column or dialysis. Two-dimensional gel electrophoresis isolates different types of proteins in a two-stage process using electric currents passed through gels. Each protein migrates to a specific location in the gel. The protein can then be separated from the gel residue using packed bed columns or dialysis.

PACKED BED COLUMNS are small disposable plastic tubes containing chromatography media. A protein sample is typically pipetted into the top of the column, which is then placed in a centrifuge or vacuum manifold to draw the sample through the media. These columns will remove salts, detergents, buffers and 2DGE gel residue, but may retain some of the protein in the media.

DIALYSIS involves the use of a porous membrane which allows small molecules such as salts, detergents, buffers and 2DGE gel residue to pass through but blocks larger molecules such as proteins from passing through. Dialysis involves pipetting the protein sample into a device which consists of a chamber with the porous membrane covering one otherwise open end. The chamber is then placed in a large volume of pure water and stirred for a period of time, which may be minutes or hours.

ADMET SCREENING. ADMET testing at the secondary screening stage has traditionally relied almost exclusively on live animal testing instead of tools. The most common animals used in drug discovery studies are laboratory rats and mice. As a drug compound moves closer to human clinical trials, the United States Food and Drug Administration requires that studies be performed using larger animals, such as rabbits and dogs.

LIMITATIONS OF CURRENT TECHNOLOGIES

PROTEIN PURIFICATION. Current technologies for protein purification in proteomics have the following limitations:

- LOW PRODUCTIVITY. Neither packed bed columns nor dialyzers are easily capable of automated sample handling. Using packed bed columns, either alone or in connection with two-dimensional gel electrophoresis, requires centrifugation or the use of a vacuum to move the sample through the purification media. This means the sample must be physically moved to the centrifuge or vacuum pump, left to run--typically for several minutes--then removed, washed and the protein eluted.

- LOSS OF PROTEIN SAMPLE. Packed bed columns consume a portion of the sample leading to sample loss. The amount of sample lost in the purification process may only be microliters. This is not a significant problem if several milliliters of sample are available, as is common in DNA purification. However, if only a few microliters of sample are available, as is common in protein purification, the loss of even one microliter may be a large percentage of the total. In addition, protein samples are typically expensive and thus sample loss must be minimized.

ADMET SCREENING. Current technologies for ADMET screening have the following limitations:

- HIGH COST. Animal assays are costly because all animals have to be housed and cared for under strict government regulations often in clean room environments and with a significant staff to care for the animals. A standard 14-day range finding study performed using laboratory rats costs approximately $75,000, and a two-year carcinogenicity study carried out with laboratory rats costs approximately $1 million. A later stage 90-day study carried out using dogs typically costs almost twice as much as the same test performed using laboratory rats.

- LABOR INTENSITY. By their nature, animal assays cannot be automated and thus require the time of highly skilled research scientists, such as surgeons and pathologists.

- ETHICAL CONSIDERATIONS. Even though researchers must use the lowest number of the least sentient animals to achieve the scientifically needed information, avoid pain and consider alternatives to the use of live animals, the large number of animals used still creates ethical considerations.

OUR SOLUTIONS

We overcome the limitations of current technologies by providing innovative, enabling tools for drug discovery, particularly in the areas of proteomics and ADMET screening. Set forth below are examples of the manner in which some of the newer proprietary products we have recently begun to market provide solutions in protein purification and ADMET screening.

PROTEIN PURIFICATION

Our protein purification technologies are designed to be quick to use and to reduce sample loss.

- HIGHER PRODUCTIVITY. Our purification pipette tips are quicker to use than packed bed columns because a centrifugation or vacuuming step is not necessary. This avoids both the moving of the sample to and from the centrifuge or vacuum pump and the run time in the centrifuge or

vacuum pump. We believe our protein purification pipette tips are the only pipette tips capable of being fitted to standard pipetting workstations and thus being used for automated protein purification. This automation increases our customers' productivity. In addition, our 96 well plate versions of dialyzers and spin columns can be used directly in automated equipment, again increasing our customers' productivity.

- REDUCED SAMPLE LOSS. Our miniaturization of dialyzers and spin columns reduces sample loss in the membrane or column material. Our purification pipette tips contain smaller volumes of material than packed bed columns and thus less sample is retained in the material.

ADMET SCREENING

Our ADMET screening technologies employ novel approaches to obtaining ADMET data while reducing the use of large numbers of live animals.

- LOWER COST. Most of our ADMET screening products use organs, tissue or blood proteins rather than live animals. For example, our in vitro toxicology assay uses the lenses of cows' eyes obtained as a by-product of the beef industry, and our 96 well plate for serum protein binding uses blood proteins in vitro rather than in the bloodstream of live laboratory animals.

- IMPROVED AUTOMATION. Our in vitro toxicology assay can be run in a few minutes of instrument time and a few hours of elapsed time. By contrast, basic toxicology tests in animals typically take days of elapsed time and more advanced tests take weeks or months. Our 96 well plate for serum protein binding, for instance, can be run on automated liquid handling equipment.

- REDUCED ANIMAL USAGE. Our in vitro toxicology assay uses cow eye lenses instead of live animals to detect toxic effects of compounds. Our drug absorption chamber uses cultured human colon cells instead of animal intestinal tissue to simulate the absorption of a drug into the blood from the digestive tract. Our 96 well plate for serum protein binding tests the binding ability of compounds on extracted blood proteins instead of infusing the compounds into the bloodstreams of live test animals.

OUR STRATEGY

Our goal is to become the leading provider of innovative, enabling technologies and products for proteomics and ADMET research in the drug discovery process. Key elements of our strategy are to:

ESTABLISH OUR PROTEOMICS AND ADMET SCREENING PRODUCTS AS INDUSTRY STANDARDS

In order to establish our products as industry standards, we intend to provide a broad selection of products focused on the target validation and ADMET screening stages of the drug discovery process. We have recently introduced several new innovative products designed to reduce the cost and time associated with protein purification and ADMET screening in drug discovery. We have already begun to realize revenue from the sales of our products, including purification pipette tips, spin columns, dialyzers, in vitro toxicology assays and equilibrium dialysis plates. We intend to rapidly increase the market acceptance of these products through the development of new uses for these products, focused, direct marketing campaigns to our extensive customer base and promotions at scientific exhibitions.

LAUNCH A BROAD RANGE OF INNOVATIVE NEW TOOLS FOR DRUG DISCOVERY

Since our reorganization in 1996, we have focused on becoming a leading provider of tools for proteomics and ADMET screening. We believe that our customers are eager to acquire new and innovative tools that reduce drug discovery time and expense. Since 1996, we have introduced several new tools for proteomics and ADMET screening such as our protein and DNA purification pipette tips, protein purification dialyzers, ScanTox in vitro toxicology assay and NaviCyte diffusion chambers.

We intend to continue to identify, develop and introduce new tools to alleviate bottlenecks in all stages of the drug discovery process.

LEVERAGE OUR EXISTING DISTRIBUTION AND MARKETING CHANNELS

We intend to leverage the strength of our existing distribution channels to launch new products. Our 1,000 page catalog is currently distributed worldwide to approximately 100,000 researchers engaged in drug discovery and is also accessible on our website. Our customer list consists primarily of research personnel, who are the end-users of our products and largely responsible for initiating the purchase of our products. We also have wholly-owned subsidiaries in the United Kingdom, Germany, France and Canada providing us with an international market presence. In addition, some of our products are sold through a distribution arrangement with Amersham Pharmacia Biotech, or APBiotech, providing us with access to APBiotech's extensive customer base, reputation and support infrastructure. We believe that our extensive existing distribution channels, when combined with our strong reputation for high quality, reliable and durable tools, provides us with a competitive advantage in bringing new products to market quickly and cost effectively.

PROVIDE A SINGLE SOURCE OF TOOLS FOR OUR CUSTOMERS' RESEARCH NEEDS IN PROTEOMICS AND ADMET SCREENING

We seek to provide our customers with all of the tools necessary to conduct a wide variety of proteomic and ADMET experiments that are crucial to the drug discovery process. We believe that being a single source sets us apart from our competitors by increasing the likelihood that our customers will turn to our catalog or website first when looking for help with a particular experiment. Currently, our catalog and website include approximately 10,000 products. In addition, our extensive product selection allows us to leverage the sales of our proprietary products through the simultaneous sale of complementary products.

ACQUIRE COMPLEMENTARY TECHNOLOGIES

We intend to selectively acquire companies and technologies which we believe will strengthen our portfolio of tools for drug discovery, particularly in the areas of proteomics and ADMET screening. Since 1996, we have completed the acquisition of Biochrom, four other acquisitions involving the integration of acquired products and technology into our existing manufacturing base and distribution channel, and three technology acquisition or licensing transactions. In the future, we may pursue acquisitions of new products and technologies through business acquisitions, partnerships or licensing arrangements.

OUR PRODUCTS

Our products consist of both proprietary and non-proprietary products. We have historically derived the majority of our revenue from sales of proprietary products. We also act as a distributor for many non-proprietary products, which consist primarily of products used in conjunction with our proprietary products. We offer these products as a means of deriving additional revenue from customers whose initial interest in our products arises primarily out of our selection of proprietary products. We have historically derived most of our remaining revenue from the sales of these complementary, non-proprietary products.

Our broad array of proprietary products consist of the products set forth in the table below and the products described in the "Other Proprietary Products" section below the table:

PRODUCT CATEGORY	REPRESENTATIVE PRODUCT AREAS	DESCRIPTION	NUMBER OF PRODUCTS	YEAR OF INTRODUCTION FOR PRODUCT AREAS BY US OR ONE OF OUR PREDECESSORS	YEAR OF INTRODUCTION OF PRODUCT AREAS BY US
PROTEOMICS					
Protein Purification	Purification Pipette Tips	Disposable pipette tips - coated with purification media - loaded with purification media	50	1999 (coated) Est. Q4 2000 (loaded)	2000
	Macro Spin Columns	Disposable tubes containing purification media	20	1998	2000
	Ultra Micro Spin Columns	Disposable tubes containing purification media	20	1998	2000
	Dialyzers	Membrane capped plastic chambers - reusable - disposable - plates with 96 wells	45	1996 and prior	2000
	Equilibrium Dialyzers	Membrane separating two plastic chambers - disposable - plates with 96 wells	9	1996-1999	2000
Protein Analysis	Molecular Biology Spectrophotometers*	Range of spectrophotometers	6	1970s (initial) 2000 (latest)	1999
	DNA/RNA/Protein Calculators*	Spectrophotometers with application software	2	1993 (initial) 2000 (latest)	1999
	Multi-Well Plate Readers	Range of automated readers - absorbance - luminescence - fluorescence	3	Est. Q4 2000 (absorbance) Est. 2001 (luminescence) Est. 2001 (fluorescence)	Est. Q4 2000
	Amino Acid Analysis Systems*	Ninhydrin-based amino acid detection systems	2	1970s (initial) 2000 (latest)	1999
ADMET SCREENING					
Absorption (in vitro)	NaviCyte Diffusion Chambers	Simulated digestive tract/ blood stream interfaces	6	1999	1999
Distribution	Equilibrium Dialysis Plate	Membrane separating two chambers	9	1996-1999	2000
Metabolism/ Elimination	Organ Testing Systems	Chambers with stimulators, perfusion and recording devices	8	1970s-1999	1999
Toxicology	ScanTox Assay	In vitro toxicology assay	1	2000	2000
	Precision Infusion Pumps	Syringe pumps	80	1952 (mechanical) 1986 (microprocessor) 1998 (latest)	1996

* We acquired all of these products in March 1999 through our acquisition of Biochrom. The financial statements for Biochrom included in this prospectus present the financial results of Biochrom's business for the years ended December 31, 1998 and 1997.

We believe that sales of products included within the product areas set forth in the table above currently generate approximately two-thirds of our total revenue. For the fiscal years ended December 31, 1997 and 1998, which preceded our March 1999 acquisition of Biochrom, we believe that we generated approximately one-third of our total revenue from sales of these products and between approximately one-quarter and one-half of our total revenue from sales of non-proprietary products. For the year ended December 31, 1999 and the nine-month period ended September 30, 2000, we believe that revenue from sales of our molecular biology spectrophotometers and related consumables exceeded 15% of our total revenue. For the years ended December 31, 1997 and 1998, we believe that revenue from sales of our precision infusion pumps exceeded 15% of our total revenue. Except as noted above, we do not believe that revenue from sales of any other class of our products exceeded 15% of our total revenue in the years ended December 31, 1997, 1998 and 1999 and the nine-month period ended September 30, 2000. The "Year of Introduction for Product Areas Introduced by Us or One of Our Predecessors" column set forth in the table above represents the year in which we or one of our predecessor companies introduced the first generation product in this product area.

PROTEOMICS PRODUCTS--PROTEIN PURIFICATION

PREPTIP PROTEIN PURIFICATION PIPETTE TIPS

Our proprietary PrepTip pipette tips consist of a standard disposable pipette tip coated on the inside with the same chromatography media used in packed bed columns. This coating selectively binds proteins, but not the salts, detergents, electrophoresis gels, buffers and cellular debris that are often mixed in with the proteins. Our PrepTip pipette tip enables customers to rapidly purify proteins by avoiding the time-consuming usage of a centrifuge required when using spin columns. In addition, it is easy to use because the protein solution is handled entirely within the pipette tip and does not have to be moved through a separate device like a packed bed column or dialyzer. Because our PrepTip pipette tips use the same chromatography media as packed bed columns, they can take advantage of the wide range of existing purification protocols using these media.

PURETIP DNA PURIFICATION PIPETTE TIPS

PureTip pipette tip uses a pipette tip that is similar to the PrepTip pipette tip, but is loaded with a gel rather than coated. This is well suited for performing DNA purification. PureTip pipette tips are more adaptable to automation than spin columns because they fit onto automated pipetting workstations. We expect to launch the PureTip pipette tip later this year.

SPIN COLUMNS

Spin columns are short plastic tubes that contain purification media. Once a sample is placed in the tube, it is typically spun in a centrifuge to move the sample through the media and separate the proteins from the other cellular debris. Our Ultra Micro spin columns, which we provide in both single and 96 well plate versions, contain chromatography media for use in purifying sample volumes as small as five microliters. This is significantly smaller than the sample volume required by columns produced by our largest competitors.

PROTEIN PURIFICATION DIALYZERS

Dialyzers are small chambers with an open end covered with a membrane. The membrane allows small molecules to pass through but not large molecules. Because proteins are large molecules and most contaminants are small molecules, this is an effective way to purify proteins. We make single- and double-sided reusable and disposable dialyzers.

DISPOSABLE EQUILIBRIUM DIALYZERS

Our proprietary disposable equilibrium dialyzers are effective cost-efficient products for protein binding studies and can handle sample sizes as small as 75 microliters. These disposable products are particularly useful for binding studies involving radioactively labeled compounds because the dialyzer does not require cleaning after use.

PROTEOMICS PRODUCTS--PROTEIN ANALYSIS

MOLECULAR BIOLOGY SPECTROPHOTOMETERS

A spectrophotometer is an instrument widely used in molecular biology and cell biology to quantify the amount of a compound in a sample by shining a beam of white light through a prism or grating to divide it into component wavelengths. Each wavelength in turn is shone through a liquid sample and the spectrophotometer measures the amount of light absorbed at each wavelength. This enables the quantification of the amount of a compound in a sample. We sell a wide range of spectrophotometers under the names UltroSpec and NovaSpec. These products are manufactured by our Biochrom subsidiary and sold primarily through our distribution arrangement with Amersham Pharmacia Biotech.

DNA/RNA/PROTEIN CALCULATORS

A DNA/RNA/protein calculator is a bench top instrument dedicated to quantifying the amount of DNA, RNA or protein in a sample. It uses a process similar to that of a molecular biology spectrophotometer. These are sold under the names GeneQuant and GeneQuantPro. Launched in 1993, we believe that we were the first company to sell such an instrument. These products are manufactured by our Biochrom subsidiary and sold primarily through Amersham Pharmacia Biotech.

MULTI-WELL PLATE READERS

Multi-well plate readers are widely used for high throughput screening assays in the drug discovery process. The most common format is 96 wells. They use light to detect chemical interactions. We plan to introduce a range of these products beginning with absorbance readers in the fourth quarter of 2000 and luminescence and fluorescence readers in 2001 primarily for distribution through Amersham Pharmacia Biotech.

AMINO ACID ANALYSIS SYSTEMS

An amino acid analysis system uses chromatography to separate the amino acids in a sample and then uses a chemical reaction to detect each one in turn as they flow out of the chromatography column. Amino acids are the building blocks of proteins. In June 2000, we acquired substantially all of the amino acid analysis systems business of the Biotronik subsidiary of Eppendorf-Netheler-Hinz GmbH and integrated it with the existing amino acid analysis systems business in our Biochrom subsidiary.

ADMET SCREENING PRODUCTS

We have traditionally sold products for ADMET testing that are based upon animal models. However, as a result of a series of acquisitions and licensing transactions, we have begun to develop and manufacture organ testing systems, tissue testing systems and serum protein binding assays for early toxicology testing.

NAVICYTE DIFFUSION CHAMBERS

A diffusion chamber is a small plastic chamber with a membrane separating the two halves of the chamber used to measure the absorption of a drug into the bloodstream. The membrane can either be

tissue such as intestinal tissue or a cultured layer of cells such as human colon cells. This creates a miniaturized model of intestinal absorption. We entered this market with our 1999 acquisition of the assets of NaviCyte Inc., a wholly owned subsidiary of Trega Biosciences.

96 WELL EQUILIBRIUM DIALYSIS PLATE FOR SERUM PROTEIN BINDING ASSAYS

Our 96 well equilibrium dialysis plate operates in a similar way to the equilibrium dialyzers for target validation described above. The difference is that both chambers on either side of the membrane are capped. The protein target is placed on one side of the membrane and the drug on the other. The small molecule drug diffuses through the membrane. If it binds to the target, it cannot diffuse back again. If it does not bind, it will diffuse back and forth until an equilibrium is established. Thus, measuring the drug concentration determines the strength of binding. This product is principally used for ADMET screening to determine if a drug binds to blood proteins. A certain level of reversible binding is advantageous in order to promote good distribution of a drug through the human body. However, if the binding is too strong, it may impair normal protein function and cause toxic effects.

ORGAN TESTING SYSTEMS

Organ testing systems use glass or plastic chambers together with stimulators and recording electrodes to study organ function. Organ testing systems enable either whole organs or strips of tissue from organs such as hearts, livers and lungs to be kept functioning outside the body while researchers perform experiments with them. They are typically used in place of live animals. We have sold basic versions of these systems for many years, but have significantly expanded our product offerings through our November 1999 acquisition of Hugo Sachs Elektronik. Studies on isolated livers are useful in determining metabolism and studies on kidneys are useful in determining elimination.

SCANTOX IN VITRO TOXICOLOGY SCREENING

Our proprietary ScanTox in vitro toxicology screening system uses a living organ system, a bovine eye lens, to detect the toxic effect of compounds by measuring the refraction of laser light passing through the eye lens. A healthy lens focuses light to a point, but when a toxic compound is added to the lens environment, the lens reacts by defocusing. The extent of defocusing is measured and analyzed by the instrument. Its advantages include:

- higher relevance to whole body toxicology than a cell-based assay, without the complicated support and measurement apparatus needed for other organs such as hearts or lungs,

- higher sensitivity and reproducibility than live animal assays,

- higher sensitivity than other tissue assays, and

- easier operation than other animal or tissue assays because the data is collected and analyzed automatically.

PRECISION INFUSION PUMPS

Infusion pumps, typically syringe pumps, are used to accurately infuse very small quantities of liquid, commonly drugs. Infusion pumps are typically used for long-term toxicology testing of drugs by infusion into animals, typically laboratory rats. We sell 80 types of syringe pumps.

OTHER PROPRIETARY PRODUCTS

CELL INJECTION SYSTEMS

Cell injection systems use extremely fine bore glass capillaries to penetrate and inject drugs into or around individual cells. Cell injection systems are used to study the effects of drugs on single cells.

Injection is accomplished either with air pressure or, if the drug molecule is electrically charged, by applying an electric current. We entered this market with our 1998 acquisition of the research products of Medical Systems Corporation.

VENTILATORS

Ventilators use a piston driven air pump to inflate the lungs of an anesthestised animal. Ventilators are typically used in surgical procedures common in drug discovery. Our advanced Inspira ventilators have significant safety and ease of use features, such as default safety settings, not found on other ventilators.

CPK ATOMIC MODELS

CPK atomic models use colored plastic parts to accurately model molecular structures, such as DNA. We offer a wide range of components and assembled models.

STRONGHOLD LABORATORY CLAMPS

Stronghold laboratory clamps are made from glass reinforced nylon. Our clamps resist rusting which is a common problem with steel clamps. We provide a wide variety of clamps, stands and lattices.

OEM PRODUCTS

Our reputation for quality, durability and reliability has led to the formation of a number of original equipment manufacturer, or OEM, relationships with major life science instrument companies. These relationships are conducted through purchase orders and are not contractual. A good example of these relationships is with respect to our syringe pumps. Our syringe pumps are capable of delivering flow rates as low as 0.001 microliters per hour while maintaining high accuracy. We have adapted, in conjunction with our OEMs, the core technology embodied in our syringe pumps to make specialized sample injectors for many of the major mass spectrometry manufacturers.

DISTRIBUTED PRODUCTS

In addition to the proprietary, manufactured products described above, we buy and resell through our catalog products made by other manufacturers. We have negotiated supply agreements with the majority of the companies that provide our distributed products. These supply agreements specify pricing only and contain no minimum purchase commitments. None of these agreements represents more than two percent of our revenues. Distributed products accounted for approximately 18% of our revenues for the nine months ended September 30, 2000. These distributed products enable us to provide our customers with a single source for their experimental needs. These complementary products consist of a large variety of devices, instruments and consumable items used in experiments involving animals and biological tissue in the fields of proteomics, physiology, pharmacology, neuroscience, cell biology, molecular biology and toxicology. Our manufactured products are often leaders in their fields, but researchers often need complementary products in order to conduct their particular experiments. Most of these complementary products come from small companies without our extensive distribution and marketing channel.

OUR CUSTOMERS

Our customers are primarily end user research scientists at pharmaceutical and biotechnology companies, universities and government laboratories, such as the U.S. National Institutes of Health, or NIH. Our largest customers in the United States include Baylor College of Medicine, Bristol-Myers Squibb Company, Eli Lilly and Company, Johns Hopkins University, Merck & Co., Inc., NIH, Parke-

Davis, Pfizer Inc., Schering-Plough Corporation, SmithKline Beecham plc and the University of California.

We conduct direct sales in the United States, the United Kingdom, Germany, France and Canada. We also maintain distributors in other countries. Aggregate sales to our largest customer, Amersham Pharmacia Biotech, as a distributor with end users similar to ours, accounted for approximately 39% of our revenue for the nine months ended September 30, 2000, and 44% of our revenue for the fiscal year ended December 31, 1999. We have several thousand customers worldwide and no other customer accounted for more than five percent of our revenue for such periods.

SALES AND MARKETING

DIRECT SALES

We periodically produce and mail approximately 100,000 copies of our 1,000-page catalog, which contains approximately 10,000 items. We distribute the majority of our products ordered from our catalog through our worldwide subsidiaries. Our manufactured products accounted for approximately 82% of our revenues for the nine months ended September 30, 2000. The complete catalog is also available as a CD-ROM and can be accessed on our website, www.harvardbioscience.com. Our significant positions in many of our manufactured products create traffic to the catalog and web site which enables cross-selling and facilitates the introduction of new products. In addition to the comprehensive catalog, we create and mail abridged catalogs which focus on specific product areas along with direct mailers which introduce or promote new products.

AMERSHAM PHARMACIA BIOTECH DISTRIBUTOR

Since the 1970s, our Biochrom subsidiary has used Amersham Pharmacia Biotech, or APBiotech, and its predecessors as its primary marketing and distribution channel. When we acquired Biochrom from Pharmacia and Upjohn in 1999, we signed a distribution, marketing and new product development agreement with APBiotech. Under the terms of this agreement, APBiotech serves as the exclusive distributor, marketer and seller of a majority of the products of our Biochrom subsidiary. During the term of this agreement, APBiotech has agreed to purchase a minimum number of our products for an annual amount of $12.5 million, subject to adjustment for price increases and product sales volume. We have certain affirmative duties under the agreement to assist APBiotech in the sale of our products. For example, we have agreed to cooperate with APBiotech in its sales and marketing program and to provide sales, demonstration and support training for APBiotech. This agreement may be terminated early under specified circumstances. For example, if we breach the exclusivity, pricing or shipping provisions of the agreement and fail to remedy the breach within 30 days of receiving written notice of the breach from APBiotech, then the agreement may be terminated. In addition, we may terminate the agreement under specified circumstances. For example, failure by APBiotech to place certain information in escrow, to pay for products or to purchase a minimum number of products each year enables us to terminate the agreement unless APBiotech remedies the breach within 30 days of receiving written notice of the breach from us. This agreement may be terminated by either party upon 18 months' prior written notice. This agreement does not have a finite term, but remains in effect until terminated by either us or APBiotech.

RESEARCH AND DEVELOPMENT

Our principal research and development mission is to develop a broad portfolio of technologies, products and core competencies in drug discovery tools, particularly for application in the areas of proteomics and ADMET.

Our development expenditures were $206,000 in 1997, $325,000 in 1998 and $1.2 million in 1999. We anticipate that we will continue to make significant development expenditures. We plan to continue

to pursue a balanced development portfolio strategy of originating new products from internal research and development programs and business and technology acquisitions.

We maintain development staff in each of our manufacturing facilities to design and develop new products. In-house development is focused on our current technologies. For new technologies, our strategy has been to license or acquire proven technology from universities and biotechnology companies and then develop the technology into commercially viable products.

MANUFACTURING

We manufacture and test the majority of our products in our four principal manufacturing facilities located in the United States, the United Kingdom and Germany. We have considerable manufacturing flexibility at our various facilities, and each facility can manufacture multiple products at the same time. We maintain in-house key manufacturing know-how, technologies and resources. We seek to maintain multiple suppliers for key components that are not manufactured in-house.

Our manufacturing operations are essentially to assemble and test. Our manufacturing of syringe pumps, ventilators, cell injectors and protein purification products takes place in Holliston, Massachusetts. Our manufacturing of spectrophotometers and amino acid analysis systems takes place in Cambridge, England. Our manufacturing of surgery-related products and teaching products takes place in Edenbridge, England. Our manufacturing of complete organ testing systems takes place in March-Hugstetten, Germany. Our Cambridge, England facility is certified to ISO 9001.

COMPETITION

The markets into which we sell our products are highly competitive, and we expect the intensity of competition to increase. We compete with many companies engaged in developing and selling tools for drug discovery. Many of our competitors have greater financial, operational, sales and marketing resources, and more experience in research and development and commercialization than we have. Moreover, competitors may have greater name recognition than we do, and many offer discounts as a competitive tactic. These competitors and other companies may have developed or could in the future develop new technologies that compete with our products or which could render our products obsolete. We cannot assure you that we will be able to make the enhancements to our technologies necessary to compete successfully with newly emerging technologies. We are not aware of any significant products sold by us which are currently obsolete.

We believe that we offer one of the broadest selections of protein purification and ADMET technologies to companies engaged in drug discovery. We are not aware of any competitor which offers a product line of comparable breadth within the protein purification and ADMET product markets. We have numerous competitors on a product line basis. We believe that we compete favorably with our competitors on the basis of product performance, including quality, reliability and speed, technical support, price and delivery time. We compete with several companies that provide instruments for proteomics and ADMET screening. In the DNA/RNA/protein calculator area, we compete with PerkinElmer Instruments, Inc. and Bio-Rad Laboratories, Inc. In the molecular biology spectrophotometer area, we compete with Beckman Coulter, Inc. and PerkinElmer Instruments, Inc. In the protein sample preparation area, we compete with Millipore Corporation, Pierce Chemical Company and Spectrum Medical. In the ADMET screening area, we compete with KD Scientific, Razel Scientific Instruments, Inc., Experimetria Ltd., Kent Scientific Corporation, Warner Instruments, General Valve Company, Eppendorf-Netheler-Hinz GmbH, Ugo Basile and Becton, Dickinson and Company. In the area of OEM products, we face competition primarily from the in-house engineering teams of our OEM customers.

INTELLECTUAL PROPERTY

To establish and protect our proprietary technologies and products, we rely on a combination of patent, copyright, trademark and trade-secret laws, as well as confidentiality provisions in our contracts. Most of our new technology is covered by patents or patent applications. Most of our base business is protected by trade names and trade secrets only.

We have implemented a patent strategy designed to provide us with freedom to operate and facilitate commercialization of our current and future products. We currently own ten issued U.S. patents and have four pending applications. We also hold exclusive licenses for the technologies used in our ScanTox in vitro toxicology products, our NaviCyte drug absorption products and our PureTip pipette tip products. In addition to these licenses, our principal technologies are covered by issued patents for our dialyzers and our Ultra Micro spin columns and by pending applications for our PrepTip pipette tips. Furthermore, international patent applications are pending in connection with one of our U.S. patent applications and one of our licensed patents.

Generally, U.S. 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. Our issued US patents will expire between 2011 and 2018. Our success depends to a significant degree upon our ability to develop proprietary products and technologies. We intend to continue to file patent applications as we develop new products and technologies.

Patents provide some degree of protection for our intellectual property. However, the assertion of patent protection involves complex legal and factual determinations and is therefore uncertain. The scope of any of our issued patents may not be sufficiently broad to offer meaningful protection. In addition, our issued patents or patents licensed to us may be successfully challenged, invalidated, circumvented or unenforceable so that our patent rights would not create an effective competitive barrier. Moreover, the laws of some foreign countries may not protect our proprietary rights to the same extent as do the laws of the United States. In addition, the laws governing patentability and the scope of patent coverage continue to evolve, particularly in areas of interest to us. As a result, there can be no assurance that patents will issue from any of our patent applications or from applications licensed to us. In view of these factors, our intellectual property positions bear some degree of uncertainty.

We also rely in part on trade-secret protection of our intellectual property. We attempt to protect our trade secrets by entering into confidentiality agreements with third parties, employees and consultants. Our employees and consultants also sign agreements requiring that they assign to us their interests in patents and copyrights arising from their work for us. Many of our U.S. employees have signed agreements not to compete unfairly with us during their employment and after termination of their employment, through the misuse of confidential information, soliciting employees, soliciting customers and the like. 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 we have taken to protect our intellectual property, we cannot assure you that third parties will not independently discover or invent competing technologies, or reverse engineer our trade secrets or other technologies. Therefore, the measures we are taking to protect our proprietary rights may not be adequate.

We do not believe that our products infringe on the intellectual property rights of any third party. We cannot assure you, however, that third parties will not claim such infringement by us or our licensors with respect to current or future products. We expect that product developers in our market will increasingly be subject to such claims as the number of products and competitors in our market segment grows and the product functionality in different market segments overlaps. In addition, patents on production and business methods are becoming more common and we expect that more patents will

issue in our technical field. Any such claims, with or without merit, could be time-consuming, result in costly litigation and diversion of management's attention and resources, cause product shipment delays or require us to enter into royalty or licensing agreements. Moreover, such royalty or licensing agreements, if required, may not be on terms acceptable to us, or at all, which could seriously harm our business or financial condition.

GOVERNMENT REGULATION

We are not subject to direct governmental regulation other than the laws and regulations generally applicable to businesses in the domestic and foreign jurisdictions in which we operate. In particular, we are not subject to regulatory approval by the United States Food and Drug Administration as none of our products are sold for use in diagnostic procedures or on human clinical patients. In addition, we believe we are in compliance with all relevant environmental laws.

EMPLOYEES

As of October 15, 2000, we had 127 full-time employees and 6 part-time employees, 38 of whom resided in the United States, 77 of whom resided in the United Kingdom, 11 of whom resided in Germany, 3 of whom resided in France and 4 of whom resided in Canada. None of our employees is subject to any collective bargaining agreement. We believe that our relationship with our employees is good.

FACILITIES

Our four principal facilities incorporate manufacturing, development, sales and marketing and administration functions. Our facilities consist of:

- a leased 20,000 square foot facility in Holliston, Massachusetts, which is our corporate headquarters,

- a leased 28,000 square foot facility in Cambridge, England,

- an owned 15,500 square foot facility in Edenbridge, England, and

- a leased 9,000 square foot facility in March-Hugstetten, Germany.

We lease additional facilities for sales and administrative support in Les Ulix, Paris France and Montreal, Quebec Canada.

LEGAL PROCEEDINGS

On November 7, 2000, we received correspondence from counsel to Harvard University claiming that our use of the term "Harvard Bioscience" and other terms containing or consisting of the term "Harvard" constitutes trademark infringement, false designation of origin, unfair competition and cybersquatting. Counsel to Harvard University has also threatened us with legal action if we do not cease and permanently refrain from using these terms. We do not currently intend to take such steps, and we believe it is likely that Harvard University will pursue this matter against us. We believe that these claims are without merit, and we will vigorously seek to protect our rights regarding such claims. While we are still investigating the matter, we do not believe that the matter will have a material adverse effect on our business, financial position or results of operations.

From time to time, we may be involved in various other claims and legal proceedings arising in the ordinary course of business. We are not currently a party to any other claims or proceedings which, we believe, if decided adversely to us, would either individually or in the aggregate have a material adverse effect on our business, financial condition or results of operations.

EXECUTIVE OFFICERS AND DIRECTORS

The following table shows information about our executive officers and directors as of October 15, 2000.

NAME	AGE	POSITION
Chane Graziano	62	Chief Executive Officer and Director
David Green	36	President and Director
James Warren	55	Chief Financial Officer
Mark Norige	46	Chief Operating Officer
John House	56	Managing Director, Biochrom Ltd
Susan Luscinski	44	Vice President of Finance and Administration
Christopher W. Dick	46	Director
Robert Dishman	56	Director
John F. Kennedy	51	Director
Richard C. Klaffky, Jr	54	Director
Earl R. Lewis	56	Director

Messrs. Dick and Klaffky are members of our compensation committee.

Messrs. Kennedy, Klaffky and Lewis are members of our audit committee.

CHANE GRAZIANO has served as our Chief Executive Officer and as a member of our board of directors since March 1996. Prior to joining Harvard Bioscience, Mr. Graziano served as the President of Analytical Technology Inc., an analytical electrochemistry instruments company, from 1993 to 1996 and as the President and Chief Executive Officer of its predecessor, Analytical Technology Inc.-Orion, an electrochemistry instruments and laboratory products company, from 1990 until 1993. Mr. Graziano served as the President of Waters Corporation, an analytical instrument manufacturer, from 1985 until 1989. Mr. Graziano has over 36 years experience in the laboratory products and analytical instruments industry.

DAVID GREEN has served as our President and as a member of our board of directors since March 1996. Prior to joining Harvard Bioscience, Mr. Green was a strategy consultant with Monitor Company, a strategy consulting company, in Cambridge, Massachusetts and Johannesburg, South Africa from June 1991 until September 1995 and a brand manager for household products with Unilever PLC, a packaged consumer goods company, in London from September 1985 to February 1989. Mr. Green graduated from Oxford University with a B.A. Honors degree in physics and holds a M.B.A. degree with distinction from Harvard Business School.

JAMES WARREN has served as our Chief Financial Officer since July 2000. Prior to joining Harvard Bioscience, Mr. Warren served as the Chief Financial Officer of Aquila Biopharmaceuticals, Inc., a life sciences company, from January 1998 until July 2000 and as the Corporate Controller of Genzyme Corporation, a biotechnology company, from 1991 until January 1998. Mr. Warren holds a M.B.A. degree from Boston University.

MARK NORIGE has served as our Chief Operating Officer since January 2000 and in various other positions with us since September 1996. Prior to joining Harvard Bioscience, Mr. Norige served as a Business Unit Manager at QuadTech, Inc., an impedance measuring instrument manufacturer, from May 1995 until September 1996. Mr. Norige worked at Waters Corporation from 1977 until May 1995.

JOHN HOUSE has served as Managing Director of our Biochrom Ltd subsidiary since July 2000. Prior to joining Biochrom, Mr. House was retired from January 1995 until July 2000 and engaged during that period primarily in charitable activities. Mr. House served in various positions with, and most recently as a Managing Director of, Unicam Ltd., a manufacturer of analytical instruments, from 1987 until January 1995.

SUSAN LUSCINKSI has served as our Vice President of Finance and Administration since May 1999. Ms. Luscinski served as our Corporate Controller from May 1988 until May 1999 and has served in various other positions at our company and its predecessor since January 1985.

CHRISTOPHER W. DICK has served as a director of Harvard Bioscience since March 1996. Mr. Dick has served as Managing Director of Ascent Venture Management, Inc., a private equity firm, since March 1999. Mr. Dick has served as a Managing Member or General Partner of Ascent Venture Partners, L.P. fund and Ascent Venture Partners II, L.P. fund since 1999. Prior to joining Ascent Venture Management, Inc., Mr. Dick served as General Partner of Pioneer Capital Corporation, a private equity management firm, from 1991 until March 1999. Mr. Dick is a graduate of Cornell University and holds a M.B.A. degree from Babson College.

ROBERT DISHMAN has served as a director of Harvard Bioscience since October 2000. Since 1994, Mr. Dishman has served in various positions with, and most recently as an Executive Vice President and Director of Dyax Corp. (formerly Biotage, Inc.), a commercial physical and biological research company. Mr. Dishman holds a Ph.D. in Analytical Chemistry from the University of Massachusetts-Amherst.

JOHN F. KENNEDY has served as a director of Harvard Bioscience since October 2000. Mr. Kennedy has served as the Senior Vice President, Finance, Chief Financial Officer and Treasurer of RSA Security Inc., an e-business security company, since August 1999. Prior to joining RSA Security, Mr. Kennedy was Chief Financial Officer of decalog, NV, a developer of enterprise investment management software, from 1998 to 1999. From 1993 to 1998, Mr. Kennedy served as Vice President of Finance, Chief Financial Officer and Treasurer of Natural MicroSystems Corporation, a telecommunications company. Mr. Kennedy holds a M.S.B.A. in Accounting from the University of Massachusetts-Amherst.

RICHARD C. KLAFFKY, JR. has served as a director of Harvard Bioscience since March 1996. Since 1987, Mr. Klaffky has served as President of FINEC Corp., the corporate general partner of two private equity partnerships, First New England Capital L.P. and First New England Capital 2 L.P., based in Hartford, Connecticut. Mr. Klaffky also serves as a director of Centrum Industries, a manufacturing company in the metal forming, material handling and motor production industries. Mr. Klaffky is a graduate of Brown University and holds a M.B.A. degree from Columbia University.

EARL R. LEWIS has served as a director of Harvard Bioscience since October 2000. Mr. Lewis has served in various capacities with Thermo Instrument Systems (now merged into Thermo Electron Corporation) since 1986 and was subsequently named President in 1997 and Chief Executive Officer in 1998. ThermoElectron Corporation develops, manufactures and markets measuring and controlling devices. Mr. Lewis is Chairman of Thermo BioAnalysis Corporation, Thermo Vision Corporation, Thermo Optek Corporation, ThermoQuest Corporation, each of which is a developer of laboratory analytical instruments, and ONIX Systems, Inc., a developer of measuring and controlling devices. Mr. Lewis is a director of SpectRx, Inc., an electromedical and electrotherapeutic company, Metrika Systems Corporation, a developer of industrial instruments for measurement, display and control, and ThermoSpectra Corporation, a developer of instruments for measuring and testing of electricity and electric signals.

BOARD COMPOSITION

Following the closing of this offering, our board of directors will be divided into three classes, each of whose members will serve for a staggered three-year term. Our board of directors will consist of Messrs. Dick, Dishman and Klaffky as Class I directors, whose term of office will continue until the 2001 annual meeting of stockholders, Messrs. Green and Kennedy as Class II directors, whose term of office will continue until the 2002 annual meeting of stockholders, and Messrs. Graziano and Lewis as Class III directors, whose term of office will continue until the 2003 annual meeting of stockholders. At each annual meeting of stockholders, a class of directors will be elected for a three-year term to succeed the directors of the same class whose terms are then expiring.

BOARD COMMITTEES

Effective upon the closing of this offering, our board of directors will reconstitute the audit committee and compensation committee.

AUDIT COMMITTEE. The members of the audit committee will be responsible for recommending to the board of directors the engagement of our outside auditors and reviewing our accounting controls and the results and scope of audits and other services provided by our auditors. Our audit committee will consist of three independent directors.

COMPENSATION COMMITTEE. The members of the compensation committee, a majority of whom will be independent directors, will be responsible for approving or recommending to the board of directors the amount and type of consideration to be paid to senior management, administering our stock option plans and establishing and reviewing general policies relating to compensation and benefits of employees.

DIRECTOR COMPENSATION

We reimburse our non-employee directors for their expenses incurred in connection with attending board and committee meetings but do not provide cash compensation for their services as board or committee members. Directors are eligible to participate in our 2000 Stock Option and Incentive Plan. Each of our non-employee directors, other than Messrs. Dick and Klaffky, will receive a one-time option grant of 10,000 shares vesting annually over three years upon joining the board and an annual option grant of 2,500 shares vesting annually over three years on the date of each annual meeting of stockholders following the closing of this offering. The exercise price for each of these option grants will be equal to the fair market value of the underlying shares of our common stock on the date of grant.

EXECUTIVE COMPENSATION

The following table sets forth the total compensation paid or accrued in the fiscal year ended December 31, 1999 to our Chief Executive Officer and the three other executive officers whose aggregate compensation exceeded $100,000.

SUMMARY COMPENSATION TABLE

NAME AND POSITION	ANNUAL COMPENSATION SALARY	ANNUAL COMPENSATION BONUS	LONG-TERM COMPENSATION NUMBER OF SECURITIES UNDERLYING OPTIONS GRANTED	ALL OTHER COMPENSATION
Chane Graziano ..... Chief Executive Officer	$219,000	$232,000	458,257	$19,592(1)
David Green ..... President	175,000	186,000	458,257	15,507(2)
Mark A. Norige ..... Chief Operating Officer	108,000	35,000	--	5,447(3)
Susan M. Luscinski ..... Vice President of Finance and Administration	95,000	47,500	--	4,832(3)

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(1) Includes $7,357 in automobile lease payments, $7,520 in contributions by us to Mr. Graziano's 401(k) account and $4,715 representing life insurance purchased for Mr. Graziano's benefit.

(2) Includes $7,687 in automobile lease payments, $7,165 in contributions by us to Mr. Green's 401(k) account and $655 representing life insurance purchased for Mr. Green's benefit.

(3) Represents contributions by us to the executive officers' 401(k) accounts.

OPTION GRANTS IN LAST FISCAL YEAR AND OPTION VALUES AT FISCAL YEAR END

The following table provides information regarding stock options granted to the named executive officers during the fiscal year ended December 31, 1999.

OPTION GRANTS IN FISCAL YEAR 1999

	INDIVIDUAL GRANTS					POTENTIAL REALIZABLE VALUE AT ASSUMED ANNUAL RATE OF STOCK PRICE APPRECIATION FOR OPTION TERM(3)	
NAME	DATE OF GRANT	NUMBER OF SECURITIES UNDERLYING OPTIONS GRANTED(1)	PERCENT OF TOTAL OPTIONS GRANTED TO EMPLOYEES IN FISCAL YEAR(2)	EXERCISE PRICE PER SHARE	EXPIRATION DATE	5%	10%
Chane Graziano.....	3/2/1999	458,257	50%	$1.0461	3/2/2009	$301,480	$764,009
David Green.....	3/2/1999	458,257	50%	1.0461	3/2/2009	301,480	764,009

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(1) The options, as amended in September 2000, vest upon the sale of all or substantially all of our assets or capital stock for a price per share of common stock of at least $2.09, or if our fair market value at any time prior to December 31, 2000 results in a per share valuation, on a fully-diluted basis, of not less than $2.09 per share. The exercise price of the options is equal to the fair market value of our common stock on the date of grant.

(2) Based on an aggregate of 916,514 options granted in fiscal 1999.

(3) The amounts shown as potential realizable value illustrate what might be realized upon exercise immediately prior to expiration of the option term using the 5% and 10% appreciation rates compounded annually as established in regulations of the Securities and Exchange Commission.

The following table sets forth the potential realizable value of the options granted to the listed executive officers using our assumed initial public offering price of $12.00 per share:

	NUMBER OF SECURITIES UNDERLYING OPTIONS GRANTED	POTENTIAL REALIZABLE VALUE AT ASSUMED ANNUAL RATES OF STOCK PRICE APPRECIATION FOR OPTION TERM	
		5%	10%
Chane Graziano	458,257	$8,478,047	$13,783,827
David Green	458,257	$8,478,047	$13,783,827

The potential realizable value is not intended to predict future appreciation of the price of our common stock. The values shown do not consider non-transferability, vesting or termination of the options upon termination of the employee's employment relationship with us.

FISCAL YEAR-END OPTION VALUES

The following table sets forth information concerning the number and value of unexercised options to purchase common stock held as of December 31, 1999 by the executive officers listed in the Summary Compensation Table. There was no public trading market for our common stock as of December 31, 1999. Accordingly, the values of the unexercised in-the-money options have been calculated on the basis of the estimated fair value of our common stock at December 31, 1999 of $3.67, less the applicable exercise price multiplied by the number of shares which may be acquired on exercise. None of the executive officers listed in the Summary Compensation Table exercised any stock options in fiscal 1999.

AGGREGATE OPTION AMOUNTS AND FISCAL YEAR-END OPTION VALUES

	NUMBER OF SECURITIES UNDERLYING UNEXERCISED OPTIONS AT FISCAL YEAR-END		VALUE OF UNEXERCISED IN-THE-MONEY OPTIONS AT FISCAL YEAR-END	
NAME	EXERCISABLE	UNEXERCISABLE	EXERCISABLE	UNEXERCISABLE
Chane Graziano	783,808	570,229	$2,872,746	$1,610,825
David Green	783,808	570,229	2,872,746	1,610,825
Mark A. Norige	55,976	55,996	204,366	204,438
Susan M. Luscinski	83,965	28,007	307,742	102,653

BENEFIT PLANS

2000 STOCK OPTION AND INCENTIVE PLAN. Our board of directors has adopted the 2000 Stock Option and Incentive Plan, subject to stockholder approval. The 2000 Stock Option and Incentive Plan will be submitted to our stockholders for approval in November 2000. The 2000 Stock Option and Incentive Plan allows for the issuance of up to 3,750,000 shares of common stock plus an additional amount equal to 15% of any net increase in the total number of shares of common stock outstanding after this offering. Our compensation committee will administer the 2000 Stock Option and Incentive Plan.

Under the 2000 Stock Option and Incentive Plan, our compensation committee may:

- grant incentive stock options,
- grant non-qualified stock options,
- grant stock appreciation rights,
- issue or sell common stock with vesting or other restrictions, or without restrictions,

- grant rights to receive common stock in the future with or without vesting,

- grant common stock upon the attainment of specified performance goals, and

- grant dividend rights in respect of common stock.

These grants and issuances may be made to our officers, employees, directors, consultants, advisors and other key persons.

Our compensation committee has the right, in its discretion, to select the individuals eligible to receive awards, determine the terms and conditions of the awards granted, accelerate the vesting schedule of any award and generally administer and interpret the plan.

The exercise price of options granted under the 2000 Stock Option and Incentive Plan is determined by our compensation committee. Under present law, incentive stock options and options intended to qualify as performance-based compensation under Section 162(m) of the Internal Revenue Code of 1986 may not be granted at an exercise price less than the fair market value of the common stock on the date of grant, or less than 110% of the fair market value in the case of incentive stock options granted to optionees holding more than 10% of the voting power.

Non-qualified stock options may be granted at prices which are less than the fair market value of the underlying shares on the date granted. Options are typically subject to vesting schedules, terminate 10 years from the date of grant and may be exercised for specified periods after the termination of the optionee's employment or other service relationship with us. Upon the exercise of options, the option exercise price must be paid in full either in cash or by certified or bank check or other instrument acceptable to the committee or, in the sole discretion of the committee, by delivery of shares of common stock that have been owned by the optionee free of restrictions for at least six months.

The 2000 Stock Option and Incentive Plan and all awards issued under the plan will terminate upon a merger, reorganization or consolidation, the sale of all or substantially all of our assets or all of our outstanding capital stock or a liquidation or other similar transaction, unless Harvard Bioscience and the other parties to such transactions have agreed otherwise. All participants under the 2000 Stock Option and Incentive Plan will be permitted to exercise for a period of 30 days before any such termination all awards held by them which are then exercisable or will become exercisable upon the closing of the transaction.

EMPLOYEE STOCK PURCHASE PLAN. The Employee Stock Purchase Plan was adopted by our board of directors in October 2000 subject to stockholder approval. The Employee Stock Purchase Plan will be submitted to stockholders in November 2000. Up to 500,000 shares of our common stock may be issued under the Employee Stock Purchase Plan. The Employee Stock Purchase Plan is administered by our compensation committee.

The first offering under the Employee Stock Purchase Plan will commence on January 1, 2001 and end on June 30, 2001. Subsequent offerings will commence on each January 1 and July 1 thereafter and will have a duration of six months. Generally, all employees who are customarily employed for more than 20 hours per week as of the first day of the applicable offering period are eligible to participate in the Employee Stock Purchase Plan. Any employee who owns or is deemed to own shares of stock representing in excess of 5% of the combined voting power of all classes of our stock may not participate in the Employee Stock Purchase Plan.

During each offering, an employee may purchase shares under the Employee Stock Purchase Plan by authorizing payroll deductions of up to 10% of his cash compensation during the offering period. Unless the employee has previously withdrawn from the offering, his accumulated payroll deductions will be used to purchase shares of our common stock on the last business day of the period at a price equal to 85% of the fair market value of our common stock on the first or last day of the offering period, whichever is lower. Under applicable tax rules, an employee may purchase no more than

$25,000 worth of our common stock in any calendar year under the Employee Stock Purchase Plan. We have not issued any shares to date under the Employee Stock Purchase Plan.

1996 STOCK OPTION AND GRANT PLAN. Our 1996 Stock Option and Grant Plan was initially approved by our board of directors and was approved by our stockholders in March 1996. Our 1996 Stock Option and Grant Plan provides for the issuance of 4,072,480 shares of our common stock. As of October 15, 2000, options to purchase 599,096 shares of our common stock were outstanding under our 1996 Stock Option and Grant Plan. Options granted under our 1996 Stock Option and Grant Plan generally vest over four years and terminate on the tenth anniversary of the date of grant. We will not make any additional grants under our 1996 Stock Option and Grant Plan after the completion of this offering.

EMPLOYMENT ARRANGEMENTS

We anticipate entering into employment agreements with each of Messrs. Graziano, Green and Warren. Each proposed agreement is for a period of two years, other than Mr. Warren's agreement which is for one year. Messrs. Graziano and Green's agreement automatically extends for two additional years on the second anniversary date and Mr. Warren's agreement automatically extends for one additional year on the anniversary date unless either party has given notice that it does not wish to extend the agreement. Each agreement provides for the payment of base salary and incentive compensation and for the provision of certain fringe benefits to the executive. Under their respective employment agreements, the annual salary for Mr. Graziano is $275,000, the annual salary for Mr. Green is $225,000 and the annual salary for Mr. Warren is $185,000. The agreements require our executive officers to refrain from competing with us and from soliciting our employees for a period of 12 months following termination for any reason. Each agreement also provides for certain payments and benefits for an executive officer should his or her employment with us be terminated because of death or disability, by the executive for good reason or by us without cause, as further defined in the agreements. In general, in the case of a termination by the executive officer for good reason, or by us without cause, the executive officer will receive up to two years' salary and bonus in the cases of Messrs. Graziano and Green and one years' salary and bonus in the case of Mr. Warren, an extension of benefits for one year and an acceleration of vesting for stock options and restricted stock which otherwise would vest during the next twenty-four months. Upon a change of control, as defined in the agreements, the executive officer is eligible for payment of up to three years' salary and bonus in the cases of Messrs. Graziano and Green and one-and-a-half years' salary and bonus in the case of Mr. Warren, an extension of benefits for one year and an acceleration of vesting for all outstanding stock options and restricted stock.

COMPENSATION COMMITTEE INTERLOCKS AND INSIDER PARTICIPATION

Messrs. Dick and Klaffky are the members of our compensation committee. Neither Mr. Dick nor Mr. Klaffky is an executive officer of our company or has received any compensation from us within the last three years other than in his capacity as a director.

STOCK REDEMPTIONS AND LOAN REPAYMENTS WITH STOCKHOLDERS

In March 1996, our business was acquired by a group that was led by our current management team of Chane Graziano, our Chief Executive Officer, and David Green, our President, and that also included Paul Grindle, a former member of our board of directors, Ascent Venture Partners, L.P. (formerly known as Pioneer Venture Limited Partnership), Ascent Venture Partners II, L.P. (formerly known as Pioneer Venture Limited Partnership II) and First New England Capital, L.P. In connection with this acquisition, we issued redeemable preferred stock for an aggregate purchase price of $1.5 million and subordinated debentures with an aggregate principal amount of $1.0 million to our investors. The redeemable preferred stock pays cumulative dividends at the rate of $0.26 per share quarterly in arrears and the subordinated debentures bear interest at an annual rate of 13% payable quarterly in arrears. The terms of the redeemable preferred stock and the subordinated debentures require us to redeem or repay these instruments upon the completion of this offering. A portion of the proceeds of this offering will be used to retire the redeemable preferred stock and the subordinated debentures. The redemption of the preferred stock and the retirement of the subordinated debentures will result in payments of approximately $167,000 to Mr. Graziano, our Chief Executive Officer and a member of our board of directors, $500,000 to Ascent Venture Partners, L.P., $1.0 million to Ascent Venture Partners II, L.P. and $500,000 to First New England Capital, L.P. Christopher W. Dick, a member of our board of directors, is a Managing Director of Ascent Venture Management, Inc., the general partner of Ascent Venture Partners, L.P., and Ascent Management SBIC Corp., the general partner of Ascent Venture Partners II, L.P., and Richard C. Klaffky, Jr., a member of our board of directors, is the President of FINEC Corp., the general partner of First New England Capital, L.P.

TRANSACTIONS WITH AN AFFILIATE OF AN EXECUTIVE OFFICER

In March 1996, we acquired our business from a company now known as Harvard Clinical Technology Inc. Following this acquisition, we entered into several transition-related transactions with Harvard Clinical. In 1997, we sold Harvard Clinical several items of furniture, fixtures, appliances and equipment, leased Harvard Clinical office space on the same terms as the underlying lease with the third-party landlord, provided transition support services and assumed Harvard Clinical's obligations to pay $10,000 in professional fees in exchange for 1,529,180 shares of our common stock held by a principal stockholder of Harvard Clinical at an agreed upon value of $0.11 per share. The assets purchased by Harvard Clinical had an aggregate purchase price of approximately $93,000, which reflected their estimated fair market value as determined by Mr. Graziano, our Chief Executive Officer, and the value at which they were recorded on our balance sheet. We originally purchased these assets as part of the March 1996 acquisition of our business. We believe that each of these transactions was consummated on terms at least as favorable to us as could have been obtained from unaffiliated parties. Diane Green, who is an officer, director and stockholder of Harvard Clinical, is the spouse of Mr. Green, our President and a member of our board of directors.

LOANS TO OFFICERS IN CONNECTION WITH OPTION EXERCISES

In September 2000, Mr. Graziano, our Chief Executive Officer, and Mr. Green, our President, each exercised options to purchase 740,228 shares of our common stock. Each of these officers paid substantially all of the exercise price for these shares by issuing promissory notes to the Company. The aggregate loans to Mr. Graziano are $789,000 and to Mr. Green are $789,000 pursuant to these promissory notes. Each of these promissory notes is due in September 2003 and bears interest at an annual rate of 10%. These promissory notes are secured by a pledge of all of the shares for which the exercise price was paid with the respective promissory notes as well as additional shares held by each of these officers.

CONSULTING RELATIONSHIP WITH FORMER DIRECTOR

Mr. Grindle, a member of our board of directors until October 2000, was retained by us as a consultant to provide general marketing and other advice to our senior management team and to review all of the revisions to our catalog from March 1996 to September 2000 when the consulting agreement was terminated. In connection with this consulting agreement, Mr. Grindle received consulting fees of $294,583 for the nine months ended September 30, 2000 and $258,437, $262,040 and $268,030 for the years ended December 31, 1999, 1998 and 1997, respectively. Mr. Grindle is no longer affiliated with us.

PRINCIPAL AND SELLING STOCKHOLDERS

The following table sets forth information regarding the beneficial ownership of Harvard Bioscience common stock as of October 15, 2000 and on an as adjusted basis to reflect the sale of the common stock offered hereby by:

- all persons known by us to own beneficially 5% or more of the common stock,
- each of our directors,
- the executive officers listed in the summary compensation table,
- the stockholder selling shares in this offering, and
- all of our directors and executive officers 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 October 15, 2000 through the exercise of any warrant, stock option or other right. The inclusion in this 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, MA 01746-1371.

	BENEFICIAL OWNERSHIP PRIOR TO OFFERING(1)			BENEFICIAL OWNERSHIP AFTER OFFERING(1)	
NAME OF BENEFICIAL OWNER	SHARES	PERCENT	SHARES TO BE SOLD	SHARES	PERCENT
Christopher W. Dick(2) ..... 255 State Street Boston, MA 02109	6,465,037	34.9%	--	6,465,037	26.1%
Chane Graziano(3)	5,089,929	27.5%	--	5,089,929	20.5%
Ascent Venture Partners II, L.P.(4) ..... 255 State Street Boston, MA 02109	3,927,651	21.2%	--	3,927,651	15.8%
David Green	3,479,386	18.8%	172,450	3,306,936	13.3%
Ascent Venture Partners, L.P.(5) ..... 255 State Street Boston, MA 02109	2,537,386	13.7%	--	2,537,386	10.2%
First New England Capital, L.P.(6) ..... 100 Pearl Street Hartford, CT 06103	1,963,825	10.6%	--	1,963,825	7.9%
Richard C. Klaffky(7) ..... 100 Pearl Street Hartford, CT 06103	1,963,825	10.6%	--	1,963,825	7.9%
NEGF, II, L.P.(8) ..... One Boston Place Suite 2100 Boston, MA 02108	955,935	5.2%	--	955,935	3.9%
Susan M. Luscinski	111,972	*	--	111,972	*
Mark A. Norige	83,964	*	--	83,964	*
Robert Dishman	--	*	--	--	*
John F. Kennedy	--	*	--	--	*
Earl R. Lewis	--	*	--	--	*
All executive officers and directors, as a group (9 persons)	17,194,113	92.8%	172,450	17,021,663	68.7%

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* Represents less than 1% of the outstanding shares of common stock.

(1) All percentages assume the underwriters do not elect to exercise the over-allotment option to purchase an additional 937,500 shares of common stock. The number of shares of common stock set forth herein includes shares to be issued upon completion of this offering pursuant to the conversion of all outstanding shares of our series B convertible preferred stock into shares of common stock and the exercise of all outstanding warrants to purchase shares of our common stock.

(2) Consists solely of the shares described in notes (4) and (5) below, of which Mr. Dick may be considered the beneficial owner. Mr. Dick disclaims beneficial ownership of such shares, except to the extent of his pecuniary interest therein.

(3) Includes 1,291,004 shares held by two trusts for the benefit of Mr. Graziano's children, of which Mr. Graziano is a trustee.

(4) 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., which exercises sole voting and investment power with respect to all of the shares held of record by Ascent Venture Partners II, L.P. Mr. Dick, a member of our board of directors, is the Managing Director of Ascent Management SBIC Corp. Mr. Dick disclaims any beneficial ownership of the shares held by Ascent Venture Partners II, L.P., except to the extent of his pecuniary interest therein.

(5) Ascent Venture Management, Inc. is the general partner of Ascent Venture Partners, L.P., which 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 our board of directors, is the Managing Director of Ascent Venture Management, Inc. Mr. Dick disclaims any beneficial ownership of the shares held by Ascent Venture Partners, L.P., except to the extent of his pecuniary interest therein.

(6) FINEC Corp. is the general partner of First New England Capital, L.P., which 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 our board of directors, 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.

(7) Consists solely of the shares described in note (6) above, of which Mr. Klaffky may be considered the beneficial owner. Mr. Klaffky disclaims beneficial ownership of such shares, except to the extent of his pecuniary interest therein.

(8) NEGF Ventures, Inc. is the general partner of New England Partners, II, L.P., which is the general partner of NEGF II, L.P. NEGF Ventures, Inc. exercises sole voting and investment power with respect to all of the shares held of record by NEGF II, L.P. Individually, no stockholder, director or officer of NEGF Ventures, Inc. is deemed to have or share such voting or investment power.

DESCRIPTION OF CAPITAL STOCK

Following this offering, our authorized capital stock will consist of 80,000,000 shares of common stock and 5,000,000 shares of undesignated preferred stock, issuable in one or more series designated by our board of directors. No other class of capital stock will be authorized. Prior to this offering, our common stock was held by seven stockholders of record. The following information relates only to our certificate of incorporation and by-laws, as they will exist after this offering.

COMMON STOCK

VOTING RIGHTS. The holders of our common stock have one vote per share. Holders of our common stock are not entitled to vote cumulatively for the election of directors. Generally, all matters to be voted on by 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 common stock will share ratably in any dividends declared by our board of directors, subject to the preferential rights of any preferred stock then outstanding. Dividends consisting of shares of common stock may be paid to holders of shares of common stock.

OTHER RIGHTS. Upon our liquidation, dissolution or winding up, all holders of common stock are entitled to share ratably in any assets available for distribution to holders of shares of common stock. No shares of common stock are subject to redemption or have preemptive rights to purchase additional shares of common stock.

PREFERRED STOCK

Our certificate of incorporation provides that 5,000,000 shares of preferred stock may be issued from time to time in one or more series. Our 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. Our board of 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 the common stock and could have anti-takeover effects, including preferred stock or rights to acquire preferred stock in connection with implementing a shareholder rights plan. We have no present plans to issue any shares of preferred stock. The ability of our board of directors to issue preferred stock without stockholder approval could have the effect of delaying, deferring or preventing a change of control with respect to our company or the removal of existing management.

WARRANTS

As of October 15, 2000, we had outstanding warrants to purchase 8,509,905 shares of common stock at an exercise price of $0.0005 per share. The warrants will expire on March 15, 2003. These warrants will be exercised in connection with this offering.

REGISTRATION RIGHTS

Following this offering, the holders of 17,208,101 shares of our common stock will have rights with respect to registration of these shares under the Securities Act of 1933. These rights are provided under the terms of a securityholders agreement between us and certain of the holders of registrable securities. Under these registration rights, 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 we register their shares for public resale. In addition, certain holders of registrable securities may require that we register their shares for public resale on Form S-3 or similar short-form registration, if we are 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 we elect to register any of our shares of common stock for any public offering, the holders of registrable securities are entitled to include shares of common stock in the registration. However, we may reduce the number of shares proposed to be registered in view of market conditions. We will pay all expenses in connection with any registration, other than underwriting discounts and commissions.

INDEMNIFICATION MATTERS

Prior to the offering, we will have entered into indemnification agreements with each of our directors. The form of indemnification agreement provides that we will indemnify our directors for expenses incurred because of their status as a director to the fullest extent permitted by Delaware law, our certificate of incorporation and our by-laws.

Our certificate of incorporation contains a provision permitted by Delaware law that generally eliminates the personal liability of directors for monetary damages for breaches of their fiduciary duty, including breaches involving negligence or gross negligence in business combinations, unless the director has breached his or her duty of loyalty, failed to act in good faith, engaged in intentional misconduct or a knowing violation of law, paid a dividend or approved a stock repurchase in violation of the Delaware General Corporation Law or obtained an improper personal benefit. This provision does not alter a director's liability under the federal securities laws and does not affect the availability of equitable remedies, such as an injunction or rescission, for breach of fiduciary duty. Our by-laws provide that directors and officers shall be, and in the discretion of our board of directors, non-officer employees may be, indemnified by us 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 us. Our by-laws also provide for the advancement of expenses to directors and, in the discretion of our board of directors, to officers and non-officer employees. In addition, our by-laws 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 by-law, agreement, vote of stockholders or otherwise. We also have directors' and officers' insurance against certain liabilities. We believe that the indemnification agreements, together with the limitation of liability and indemnification provisions of our certificate of incorporation and by-laws and directors' and officers' insurance will assist us in attracting and retaining qualified individuals to serve as our directors and officers.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be provided to directors, officers or persons controlling us as described above, we have been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable. At present, there is no pending material litigation or proceeding involving any of our directors, officers, employees or agents in which indemnification will be required or permitted.

PROVISIONS OF OUR CERTIFICATE OF INCORPORATION AND BY-LAWS THAT MAY HAVE ANTI-TAKEOVER EFFECTS

Certain provisions of our certificate of incorporation and by-laws described below, as well as the ability of our 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 our 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 our 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 us or to elect a new director to our board.

NO STOCKHOLDER ACTION BY WRITTEN CONSENT

Our certificate of incorporation provides that any action required or permitted to be taken by our stockholders at an annual or special meeting of stockholders must be effected at a duly called meeting and may not be taken or effected by a written consent of stockholders.

SPECIAL MEETINGS OF STOCKHOLDERS

Our certificate of incorporation and by-laws provide that a special meeting of stockholders may be called only by our board of directors. Our by-laws provide that only those matters included in the notice of the special meeting may be considered or acted upon at that special meeting unless otherwise provided by law.

ADVANCE NOTICE OF DIRECTOR NOMINATIONS AND STOCKHOLDER PROPOSALS

Our by-laws include advance notice and informational requirements and time limitations on any director nomination or any new proposal which a stockholder wishes to make at an annual meeting of stockholders. For the first annual meeting following the completion of this offering, a stockholder's notice of a director nomination or proposal will be timely if delivered to our secretary at our principal executive offices not later than the close of business on the later of the 75th day prior to the scheduled date of such annual meeting or the 10th day following the day on which public announcement of the date of such annual meeting is made by us.

AMENDMENT OF THE CERTIFICATE OF INCORPORATION

As required by Delaware law, any amendment to our 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 by written consent, directors, limitation of liability and the amendment of our certificate of incorporation must be approved by not less than 75% of the outstanding shares entitled to vote with respect to such amendment.

AMENDMENT OF BY-LAWS

Our certificate of incorporation and by-laws provide that our by-laws may be amended or repealed by our 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 our 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.

STATUTORY BUSINESS COMBINATION PROVISION

Following the offering, we will be subject to Section 203 of the Delaware General Corporation Law, which prohibits a publicly-held Delaware corporation from consummating a "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 by-laws resulting from an amendment approved by holders of at least a majority of the outstanding voting stock. Neither our certificate of incorporation nor our by-laws contain any such exclusion.

TRADING ON THE NASDAQ NATIONAL MARKET SYSTEM

We have been approved for quotation on the Nasdaq National Market under the symbol "HBIO."

NO PREEMPTIVE RIGHTS

No holder of any class of our stock has any preemptive right to purchase any of our securities.

TRANSFER AGENT AND REGISTRAR

The transfer agent and registrar for our common stock will be Registrar and Transfer Company.

SHARES ELIGIBLE FOR FUTURE SALE

Upon consummation of the offering, we will have outstanding 24,782,422 shares of common stock or 25,719,922 shares if the underwriters' over-allotment option is exercised in full, in each case excluding shares underlying outstanding options. Of these shares, all of the shares sold in this offering (6,422,450 shares, or 7,359,950 shares if the underwriters' over-allotment option is exercised in full) will be freely tradeable without restriction or further registration under the Securities Act except for any shares purchased by an "affiliate," which will be subject to the limitations of Rule 144 of the Securities Act. As defined in Rule 144, an "affiliate" of an issuer is a person that directly, or indirectly through one or more intermediaries, controls, is controlled by or is under common control with the issuer. The remaining outstanding shares of common stock will be "restricted securities" as defined in Rule 144 and may not be resold in the absence of registration under the Securities Act or pursuant to an exemption from such registration, including exemptions provided by Rule 144.

In addition, our executive officers, directors, and existing stockholders, who own all of the shares of our capital stock outstanding prior to this offering, have signed lock-up agreements in which they have agreed not to offer, sell, contract to sell or otherwise dispose of any common stock or any securities convertible into or exchangeable for common stock for a period of 180 days after the date of this prospectus without the prior written consent of Thomas Weisel Partners LLC. Immediately following this offering, the shares subject to the lock-up agreements will represent approximately 74% of the then outstanding shares of common stock (71% if the underwriters' over-allotment option is exercised in full). While the underwriters have indicated no present intention to waive these restrictions, were they to do so, up to approximately an additional 18,359,972 shares of our common stock could be available for sale during the period following the offering, which could harm our stock price or make it more difficult to sell our shares. Historically, factors that have led underwriters to waive lock-up restrictions on a case by case basis include bona fide gifts to charitable institutions and other small waivers which underwriters reasonably believe will have minimal effect on the trading price of the common stock of the applicable company.

RULE 144

In general, under Rule 144, beginning 90 days after the date of this prospectus, a person who has beneficially owned restricted shares for at least one year, including persons who are affiliates, would be entitled to sell within any three-month period a number of shares that does not exceed the greater of:

- 1% of the then outstanding shares of our common stock, approximately 247,824 shares immediately after this offering; or

- the reported average weekly trading volume of our common stock during the four calendar weeks preceding a sale by such person.

Sales under Rule 144 are also subject to manner-of-sale provisions, notice requirements and the availability of current public information.

RULE 144(k)

Under Rule 144(k), a person who has not been one of our affiliates during the 90 days preceding a sale, and who has beneficially owned the shares proposed to be sold for at least two years, is free to sell such shares without regard to the volume, manner-of-sale or certain other limitations contained in Rule 144. Upon completion of this offering, no holders of shares of our common stock will be eligible to freely sell shares under Rule 144(k).

Prior to this offering, there has been no public market for our common stock and we can make no predictions about the effect, if any, that market sales of shares or the availability of shares for sale will have on the market price of our common stock prevailing from time to time. Future sales of substantial

amounts of our common stock in the public market, or the perception that such sales may occur, may cause the market prices of our common stock to decline.

REGISTRATION RIGHTS

After the 180-day period following the closing of this offering, the holders of 17,208,101 shares of our common stock will have rights which require us to register their shares for sale. See "Description of Capital Stock--Registration Rights."

OPTIONS

As of October 15, 2000, options to purchase 599,096 shares of our common stock were outstanding. At some time following the effectiveness of the offering chosen by the board of directors in its discretion, we intend to file a registration statement on Form S-8 under the Securities Act to register all of the shares of our common stock reserved for issuance under our 2000 Stock Option and Incentive Plan, our Employee Stock Purchase Plan and our 1996 Stock Option and Grant Plan. The filing of this registration statement will allow these shares, other than those held by members of management who are deemed to be affiliates, to be eligible for resale without restriction, subject to the lock-up period related to this offering, or further registration upon issuance to participants. After the effective date of the registration statement on Form S-8 and, if applicable, the expiration of the lock-up period related to this offering, shares purchased upon exercise of options granted pursuant to these plans, generally will be available for resale in the public market by non-affiliates without restriction. Sales by our affiliates of shares registered on this registration statement are subject to all of the Rule 144 restrictions except for the one-year minimum holding period requirement.

In addition to possibly being able to sell option shares without restriction under a Form S-8 registration statement when effective, persons other than our affiliates are allowed under Rule 701 of the Securities Act to sell shares of our common stock issued upon exercise of stock options beginning 90 days after the date of this prospectus, subject only to the manner of sale provisions of Rule 144 and to the lock-up period related to this offering. Our affiliates may also begin selling option shares beginning 90 days after the date of this prospectus but are subject to all of the Rule 144 restrictions except for the one-year holding period requirement and to the 180-day lock-up period related to this offering.

GENERAL

Subject to the terms and conditions set forth in an agreement among the underwriters and us, each of the underwriters named below, through their representatives, Thomas Weisel Partners LLC, Dain Rauscher Incorporated and ING Barings LLC have severally agreed to purchase from us the aggregate number of shares of common stock set forth opposite its name below:

UNDERWRITERS	NUMBER OF SHARES
Thomas Weisel Partners LLC	
Dain Rauscher Incorporated	
ING Barings LLC	
Total	6,422,450

Of the 6,422,450 shares to be purchased by the underwriters, 6,250,000 shares will be purchased from us and 172,450 shares will be purchased from our president as a selling stockholder.

The underwriting agreement provides that the obligations of the several underwriters are subject to various conditions. The nature of the underwriters' obligations commits them to purchase and pay for all of the shares of common stock listed above if any are purchased.

The underwriting agreement provides that we and the selling stockholder will indemnify the underwriters against liabilities specified in the underwriting agreement under the Securities Act or will contribute to payments that the underwriters may be required to make relating to these liabilities.

Thomas Weisel Partners LLC expects to deliver the shares of common stock to purchasers on , 2000.

OVER-ALLOTMENT OPTION

We have granted a 30-day over-allotment option to the underwriters to purchase up to a total of 937,500 additional shares of our common stock from us at the initial public offering price, less the underwriting discounts and commissions payable by us, as set forth on the cover page of this prospectus. If the underwriters exercise this option in whole or in part, then each of the underwriters will be separately committed, subject to conditions described in the underwriting agreement, to purchase the additional shares of our common stock in proportion to their respective commitments set forth in the table above.

DETERMINATION OF OFFERING PRICE

Prior to this offering, there has been no public market for our common stock. The initial public offering price will be determined through negotiations between us and the representatives. In addition to prevailing market conditions, the factors to be considered in determining the initial public offering price will include:

- the valuation multiples of publicly-traded companies that the representatives believe are comparable to us,
- our financial information,

- our history and prospects and the outlook for our industry,

- an assessment of our management, our past and present operations, and the prospects for, and timing of, our future revenues,

- the present state of our development and the progress of our business plan, and

- the above factors in relation to market values and various valuation measures of other companies engaged in activities similar to ours.

We cannot assure you that an active or orderly trading market will develop for our common stock or that our common stock will trade in the public markets subsequent to this offering at or above the initial offering price.

COMMISSIONS AND DISCOUNTS

The underwriters propose to offer the shares of common stock directly to the public at the public offering price set forth on the cover page of this prospectus, and at this price less a concession not in excess of $ per share of common stock to other dealers specified in a master agreement among underwriters who are members of the National Association of Securities Dealers, Inc. The underwriters may allow, and the other dealers specified may reallow, concessions, not in excess of $ per share of common stock to these other dealers. After this offering, the offering price, concessions and other selling terms may be changed by the underwriters. Our common stock is offered subject to receipt and acceptance by the underwriters and to other conditions, including the right to reject orders in whole or in part.

The following table summarizes the compensation to be paid to the underwriters by us and the expenses payable by us:

		TOTAL	
	PER SHARE	WITHOUT OVER-ALLOTMENT	WITH OVER-ALLOTMENT
Public offering price	$	$	$
Underwriting discount			
Proceeds, before expenses, to us			
Proceeds, before expenses, to our president as a selling stockholder			

INDEMNIFICATION OF THE UNDERWRITERS

We and the selling stockholder will indemnify the underwriters against some civil liabilities, including liabilities under the Securities Act and liabilities arising from breaches of our representations and warranties contained in the underwriting agreement. If we are unable to provide this indemnification, we will contribute to payments the underwriters may be required to make in respect of those liabilities.

RESERVED SHARES

The underwriters, at our request, have reserved for sale at the initial public offering price up to 300,000 shares of common stock to be sold in this offering for sale to our employees and other persons designated by us. The number of shares available for sale to the general public will be reduced to the extent that any reserved shares are purchased. Any reserved shares not purchased in this manner will be offered by the underwriters on the same basis as the other shares offered in this offering.

NO SALES OF SIMILAR SECURITIES

Our directors, officers, selling stockholder and other stockholders holding all of the outstanding shares of our capital stock prior to this offering have agreed or have a contractual obligation to agree, subject to specified exceptions, not to offer, sell, agree to sell, directly or indirectly, or otherwise dispose of any shares of common stock or any securities convertible into or exchangeable for shares of common stock without the prior written consent of Thomas Weisel Partners LLC for a period of 180 days after the date of this prospectus.

We have agreed that for a period of 180 days after the date of this prospectus we will not, without the prior written consent of Thomas Weisel Partners LLC, offer, sell, or otherwise dispose of any shares of common stock, except for the shares of common stock offered in the offering and the shares of common stock issuable upon exercise of outstanding options and warrants on the date of this prospectus.

INFORMATION REGARDING THOMAS WEISEL PARTNERS LLC

Thomas Weisel Partners LLC, one of the representatives of the underwriters, was organized and registered as a broker-dealer in December 1998. Since December 1998, Thomas Weisel Partners LLC has been named as a lead or co-manager on 148 completed transactions and has acted as a syndicate member in an additional 129 public offerings of equity securities. Thomas Weisel Partners LLC does not have any material relationship with us or any of our officers, directors or other controlling persons, except with respect to its contractual relationship with us pursuant to the underwriting agreement entered into in connection with this offering.

NASDAQ NATIONAL MARKET LISTING

We have been approved for quotation on the Nasdaq National Market under the symbol "HBIO."

DISCRETIONARY ACCOUNTS

The underwriters do not expect sales of shares of common stock offered by this prospectus to any accounts over which they exercise discretionary authority to exceed five percent of the shares offered.

SHORT SALES, STABILIZING TRANSACTIONS AND PENALTY BIDS

In order to facilitate this offering, persons participating in this offering may engage in transactions that stabilize, maintain or otherwise affect the price of our common stock during and after this offering. Specifically, the underwriters may engage in the following activities in accordance with the rules of the U.S. Securities and Exchange Commission.

SHORT SALES. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in the offering. "Covered" short sales are sales made in an amount not greater than the underwriters' option to purchase additional shares from the issuer in the offering. The underwriters may close out any covered short position by either exercising their option to purchase shares or purchasing shares in the open market. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the over-allotment option. "Naked" short sales are any sales in excess of such over-allotment option. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market after pricing that could adversely affect investors who purchase in the offering.

STABILIZING TRANSACTIONS. The underwriters may make bids for or purchases of the shares for the purpose of pegging, fixing or maintaining the price of the shares, so long as stabilizing bids do not exceed a specified maximum.

PENALTY BIDS. If the underwriters purchase shares in the open market in a stabilizing transaction or syndicate covering transaction, they may reclaim a selling concession from the underwriters and selling group members who sold those shares as part of this offering. Stabilization and syndicate covering transactions may cause the price of the shares to be higher than it would be in the absence of these transactions. The imposition of a penalty bid might also have an effect on the price of the shares if it discourages resales of the shares.

The transactions above may occur on the Nasdaq National Market or otherwise. Neither we nor the underwriters make any representation or prediction as to the effect that the transactions described above may have on the price of the shares. If these transactions are commenced, they may be discontinued without notice at any time.

LEGAL MATTERS

The validity of the shares of common stock offered hereby will be passed upon for us by Goodwin, Procter & Hoar LLP, Boston, Massachusetts. Various legal matters related to the sale of the common stock offered hereby will be passed upon for the underwriters by Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Boston, Massachusetts.

EXPERTS

The consolidated financial statements of Harvard Apparatus, Inc. and subsidiaries as of December 31, 1998, 1999 and September 30, 2000, and for each of the years ended December 31, 1997, 1998 and 1999, and for the nine months ended September 30, 2000, have been included herein and in the registration statement in reliance upon the report of KPMG LLP, independent certified public accountants, appearing elsewhere herein, and the authority of said firm as experts in auditing and accounting.

The audited consolidated financial statements of Pharmacia & Upjohn (Cambridge) Limited as of December 31, 1997 and 1998, and for each of the years ended December 31, 1997 and 1998, have been included herein and in the registration statement in reliance upon the report of PricewaterhouseCoopers, independent chartered accountants, appearing elsewhere herein, and the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the Securities and Exchange Commission, or SEC, a registration statement on Form S-1 (including the exhibits and schedules thereto) under the Securities Act and the rules and regulations thereunder, for the registration of the common stock offered hereby. This prospectus is part of the registration statement. This prospectus does not contain all the information included in the registration statement because we have omitted certain parts of the registration statement as permitted by the SEC rules and regulations. For further information about us and our common stock, you should refer to the registration statement. Statements contained in this prospectus as to any contract, agreement or other document referred to are not necessarily complete. Where the contract or other document is an exhibit to the registration statement, each statement is qualified by the provisions of that exhibit.

You can inspect and copy the registration statement at the public reference facility maintained by the SEC at Room 1024, 450 Fifth Street, N.W., Washington, D.C. 20549, and at the SEC's regional offices at Seven World Trade Center, 13th Floor, New York, New York 10048 and 500 West Madison

Street, Suite 1400, Chicago, Illinois 60661. You may call the SEC at 1-800-732-0330 for further information about the operation of the public reference rooms. Copies of all or any portion of the registration statement can be obtained from the Public Reference Section of the SEC, 450 Fifth Street, N.W., Washington, D.C. 20549, at prescribed rates. In addition, the registration statement is publicly available through the SEC's site on the Internet's World Wide Web, located at http://www.sec.gov.

We will also file annual, quarterly and current reports, proxy statements and other information with the SEC. You can also request copies of these documents, for a copying fee, by writing to the SEC. We intend to furnish to our stockholders annual reports containing audited financial statements for each fiscal year.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

HARVARD APPARATUS, INC. AND SUBSIDIARIES

PHARMACIA & UPJOHN (CAMBRIDGE) LIMITED

INDEPENDENT AUDITORS' REPORT

The Board of Directors
Harvard Apparatus, Inc.:

We have audited the accompanying consolidated balance sheets of Harvard Apparatus, Inc. and subsidiaries (the "Company") as of September 30, 2000, December 31, 1999 and 1998, and the related consolidated statements of operations, stockholders' equity (deficit) and comprehensive income (loss), and cash flows for the nine months ended September 30, 2000 and for each of the years in the three-year period ended December 31, 1999. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall consolidated financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Harvard Apparatus, Inc. and subsidiaries at September 30, 2000, December 31, 1999 and 1998, and the results of their operations and their cash flows for the nine months ended September 30, 2000 and for each of the years in the three-year period ended December 31, 1999, in conformity with accounting principles generally accepted in the United States of America.

/s/ KPMG LLP
KPMG LLP
October 19, 2000, except as to
note 20 which is
as of October 25, 2000
Boston, Massachusetts

HARVARD APPARATUS, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

	DECEMBER 31, 1998	DECEMBER 31, 1999	SEPTEMBER 30, 2000
ASSETS (NOTES 6 AND 7)			
Current assets:			
Cash and cash equivalents	$ 956,771	$ 2,396,053	$ 2,148,880
Trade accounts receivable, net of reserve for uncollectible accounts of $61,004 and $87,642 at December 31, 1998 and 1999, respectively, and $88,648 at September 30, 2000	1,659,766	4,191,850	3,878,152
Other receivables and other assets	49,716	201,946	223,090
Inventories (note 4)	1,656,318	2,849,670	3,679,735
Catalog costs	450,087	66,829	394,558
Prepaid expenses	202,916	593,348	265,340
Deferred tax asset (note 13)	96,736	987,853	344,714
Total current assets	5,072,310	11,287,549	10,934,469
Property, plant and equipment, net (notes 5 and 10)	969,905	1,559,922	1,513,098
Other assets:			
Catalog costs, less current portion	163,497	165,419	193,712
Deferred tax asset (note 13)	28,182	432,797	344,304
Deferred initial public offering costs	--	--	596,365
Goodwill, net of accumulated amortization of $27,661, $395,896 and $902,891 at December 31, 1998 and 1999 and September 30, 2000, respectively (note 3)	925,973	6,583,354	9,148,744
Other assets (notes 3 and 12)	60,626	580,829	505,387
Total other assets	$1,178,278	$ 7,762,399	$10,788,512
	$7,220,493	$20,609,870	$23,236,079

See accompanying notes to consolidated financial statements.

HARVARD APPARATUS, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

	DECEMBER 31, 1998	DECEMBER 31, 1999	SEPTEMBER 30, 2000
Current liabilities:			
Short-term debt (note 6)	$1,050,000	$ 2,200,000	$ 3,150,000
Current installments of long-term debt (note 7)	190,389	794,173	1,556,618
Trade accounts payable	751,338	1,880,246	2,107,838
Accrued income taxes payable (note 13)	162,726	957,834	638,862
Accrued expenses (note 17)	586,289	1,399,523	2,266,547
Other liabilities	101,271	272,731	183,478
Current deferred income tax liability	24,524	--	6,011
Total current liabilities	2,866,537	7,504,507	9,909,354
Long-term debt, less current installments (note 7)	638,466	5,072,941	5,730,313
Deferred income tax liability (note 13)	37,601	48,649	--
Total long-term liabilities	676,067	5,121,590	5,730,313
Commitments and contingencies (notes 8, 9, 10, 11, and 18)			
Preferred stock, 600,000 shares authorized (note 8);			
Redeemable series "A" 469,300 shares issued and outstanding	1,500,000	1,500,000	1,500,000
Convertible and redeemable series "B" 48,500 shares issued and outstanding	--	1,000,000	1,000,000
Common stock warrants (note 9)	1,500,352	31,194,371	102,114,613
Total redeemable preferred stock and common stock warrants	3,000,352	33,694,371	104,614,613
Stockholders' equity (deficit) (notes 9 and 14):			
Common stock, par value $.01 per share, 80,000,000 shares authorized; 10,259,410 shares issued and outstanding at December 31, 1998 and 1999, 13,727,365 shares issued and outstanding at September 30, 2000	102,604	102,604	137,274
Accumulated other comprehensive loss	(34,720)	(54,690)	(713,265)
Additional paid-in capital--stock options	--	3,283,164	3,292,593
Additional paid-in capital--common stock	--	--	14,838,792
Retained earnings (accumulated deficit)	1,277,398	(28,373,931)	(112,357,900)
Notes receiveable	--	--	(1,547,950)
Treasury stock, 4,660,784 common shares, at cost	(667,745)	(667,745)	(667,745)
Total stockholders' equity (deficit)	677,537	(25,710,598)	(97,018,201)
	$7,220,493	$ 20,609,870	$ 23,236,079

See accompanying notes to financial statements.

HARVARD APPARATUS, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS

	YEARS ENDED DECEMBER 31,			NINE MONTHS ENDED SEPTEMBER 30,	
	1997	1998	1999	1999	2000
				(UNAUDITED)	
Revenues (notes 15 and 19)	$11,464,157	$12,154,025	$ 26,177,814	$18,469,913	$ 22,069,026
Cost of goods sold	5,127,709	5,351,271	13,546,933	9,359,160	11,461,610
Stock compensation expense (note 14)	--	--	--	--	151,200
Gross profit	6,336,448	6,802,754	12,630,881	9,110,753	10,456,216
General and administrative expense	2,338,423	2,317,021	4,146,564	2,926,818	3,733,613
Sales and marketing expense	1,672,388	1,721,606	2,448,505	1,841,771	2,358,965
Research and development	206,497	324,792	1,187,584	840,767	1,207,522
Stock compensation expense (note 14)	--	--	3,283,164	937,138	13,180,743
Amortization of goodwill (note 3)	--	27,661	368,235	251,843	423,126
Operating (loss) income	2,119,140	2,411,674	1,196,829	2,312,416	(10,447,753)
Other (expense) income:					
Foreign currency (loss) gain	(96,549)	21,418	(47,982)	60,967	(456,393)
Common stock warrant interest expense (note 9)	(116,574)	(1,379,460)	(29,694,019)	(7,402,457)	(70,920,242)
Interest expense	(238,669)	(221,932)	(679,122)	(484,330)	(689,066)
Interest income	16,176	12,567	22,767	16,159	34,536
Amortization of deferred financing costs	--	--	(63,442)	(44,437)	(56,102)
Other	106,013	10,067	(17,468)	(14,813)	27,830
Other expense, net	(329,603)	(1,557,340)	(30,479,266)	(7,868,911)	(72,059,437)
(Loss) income before income taxes	1,789,537	854,334	(29,282,437)	(5,556,495)	(82,507,190)
Income taxes (note 13)	682,329	783,192	137,480	649,392	1,354,351
Net (loss) income	1,107,208	71,142	(29,419,917)	(6,205,887)	(83,861,541)
Preferred stock dividends	(121,668)	(121,666)	(156,586)	(115,444)	(122,428)
Net (loss) income available to common shareholders	$ 985,540	$ (50,524)	$(29,576,503)	$(6,321,331)	$(83,983,969)
(Loss) income per share (note 16):					
Basic	$ 0.13	$ (0.01)	$ (5.28)	$ (1.13)	$ (13.11)
Diluted	$ 0.06	$ (0.01)	$ (5.28)	$ (1.13)	$ (13.11)
Weighted average common shares:					
Basic	7,406,486	5,598,626	5,598,626	5,598,626	6,407,682
Diluted	17,500,194	5,598,626	5,598,626	5,598,626	6,407,682

See accompanying notes to consolidated financial statements.

HARVARD APPARATUS, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT) AND COMPREHENSIVE INCOME (LOSS)

	COMMON STOCK	ACCUMULATED OTHER COMPREHENSIVE LOSS	ADDITIONAL PAID-IN CAPITAL--STOCK OPTIONS	ADDITIONAL PAID-IN CAPITAL--COMMON STOCK	RETAINED EARNINGS (ACCUMULATED DEFICIT)	NOTES RECEIVABLE	TREASURY STOCK	TOTAL STOCKHOLDERS' EQUITY (DEFICIT)
Balance at December 31, 1996	$102,604	$ 71,183	$ --	$ --	$ 342,382	$ --	$ --	$ 516,169
Preferred stock dividends	--	--	--	--	(121,668)	--	--	(121,668)
Purchase of treasury stock	--	--		--	--	--	(667,745)	(667,745)
Comprehensive income (loss):								
Net income	--	--	--	--	1,107,208	--	--	1,107,208
Translation adjustments	--	(97,444)	--	--	--	--	--	(97,444)
Total comprehensive income								1,009,764
Balance at December 31, 1997	102,604	(26,261)	--	--	1,327,922	--	(667,745)	736,520
Preferred stock dividends	--	--	--	--	(121,666)	--	--	(121,666)
Comprehensive income (loss):								
Net income	--	--	--	--	71,142	--	--	71,142
Translation adjustments	--	(8,459)	--	--	--	--	--	(8,459)
Total comprehensive income								62,683
Balance at December 31, 1998	102,604	(34,720)	--	--	1,277,398	--	(667,745)	677,537
Preferred stock dividends	--	--	--	--	(156,586)	--	--	(156,586)
Preferred stock issuance costs	--	--	--	--	(74,826)	--	--	(74,826)
Stock compensation expense	--	--	3,283,164	--	--	--	--	3,283,164
Comprehensive income (loss):								
Net loss	--	--	--	--	(29,419,917)	--	--	(29,419,917)
Translation adjustments	--	(19,970)	--	--	--	--	--	(19,970)
Total comprehensive income (loss)								(29,439,887)
Balance at December 31, 1999	102,604	(54,690)	3,283,164	--	(28,373,931)	--	(667,745)	(25,710,598)
Preferred stock dividends	--	--	--	--	(122,428)	--	--	(122,428)
Issuance of common stock	34,670	--	(13,322,514)	14,838,792	--	(1,547,950)	--	--
Stock compensation expense	--	--	13,331,943	--	--	--	--	13,331,943
Comprehensive income (loss):								
Net loss	--	--	--	--	(83,861,541)	--	--	(83,861,541)
Translation adjustments	--	(658,575)	--	--	--	--	--	(658,575)
Total comprehensive income (loss)								(84,520,116)
Balance at September 30, 2000	$137,274	$(713,265)	$ 3,292,593	$14,838,792	$(112,357,900)	$(1,547,950)	$(667,745)	$(97,017,201)

Net loss	--	(29,419,917)
Translation adjustments	--	(19,970)
Total comprehensive income (loss)		(29,439,887)
Balance at December 31, 1999	(667,745)	(25,710,598)
Preferred stock dividends		(122,428)
Issuance of common stock	--	2,998
Stock compensation expense	--	13,331,943
Comprehensive income (loss):		
Net loss	--	(83,861,541)
Translation adjustments	--	(658,575)
Total comprehensive income (loss)		(84,520,116)
Balance at September 30, 2000	$ (667,745)	$(97,018,201)

See accompanying notes to consolidated financial statements.

HARVARD APPARATUS, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

	YEARS ENDED DECEMBER 31,			NINE MONTHS ENDED SEPTEMBER 30,	
	1997	1998	1999	1999	2000
				(UNAUDITED)	
Cash flows from operating activities:					
Net (loss) income	$1,107,208	$ 71,142	$(29,419,917)	$(6,205,887)	$(83,861,541)
Adjustments to reconcile net (loss) income to net cash provided by operating activities:					
Common stock warrant interest expense	116,574	1,379,460	29,694,019	7,402,457	70,920,242
Stock compensation expense	--	--	3,283,164	937,138	13,331,943
Depreciation	127,555	154,776	331,822	219,965	284,747
Amortization of catalog costs	328,713	525,600	493,428	481,488	228,978
Loss (gain) on sale of fixed assets	(33,980)	(4,075)	7,584	(7,584)	--
Provision for bad debts	14,321	(41,388)	26,877	2,901	2,480
Amortization of goodwill	--	27,661	368,235	226,250	423,126
Amortization of deferred financing costs	--	--	63,442	44,437	56,102
Deferred income taxes	(106,321)	(16,277)	(1,310,325)	(504,188)	669,584
Changes in operating assets and liabilities, net of effects of business acquisition:					
(Increase) decrease in accounts receivable	(193,547)	46,214	(2,282,344)	(1,758,222)	22,884
(Increase) decrease in other receivables	(2,741)	57,711	(113,949)	(134,915)	(40,785)
(Increase) decrease in inventories	58,631	80,430	215,152	165,203	(777,071)
(Increase) decrease in prepaid expenses and other assets	(19,306)	(5,514)	(260,285)	(115,048)	304,718
(Increase) decrease in other assets	112,716	(184,534)	(202,460)	(162,220)	74,237
Increase (decrease) in trade accounts payable	(211,303)	(115,065)	541,065	371,739	351,636
Increase (decrease) in accrued income taxes payable	27,247	(191,013)	797,633	488,632	(224,673)
Increase (decrease) in accrued expense	(178,965)	19,874	666,637	406,952	366,788
Increase (decrease) in other liabilities	(30,881)	1,388	26,663	(23,912)	(106,253)
Net cash provided by operating activities	1,115,921	1,806,390	2,926,441	1,835,186	2,027,142
Cash flows from investing activities:					
Additions to property, plant and equipment	(389,543)	(87,405)	(332,474)	(247,748)	(363,716)
Additions to catalog costs	(429,207)	(250,183)	(121,644)	(73,853)	(606,069)
Proceeds from sales of fixed assets	165,528	8,173	34,566	41,946	--
Acquisition of businesses, net of cash acquired	--	(1,090,553)	(8,126,656)	(7,164,454)	(3,682,482)
Net cash used in investing activities	(653,222)	(1,419,968)	(8,546,208)	(7,444,109)	(4,652,267)
Cash flows from financing activities:					
Proceeds from short-term debt	275,000	600,000	2,300,000	1,050,000	1,350,000
Repayments of short-term debt	--	(300,000)	(1,150,000)	(650,000)	(400,000)
Proceeds from long-term debt	--	--	5,500,000	5,500,000	2,000,000
Repayments of long-term debt	(263,050)	(283,433)	(460,663)	(336,313)	(282,778)
Dividends paid	(218,667)	(121,666)	(121,666)	(91,000)	(91,000)
Net proceeds from issuance of preferred stock	--	--	925,174	925,174	--
Treasury stock purchase	(667,745)	--	--	--	--
Issuance of common stock	--	--	--	--	2,998
Deferred initial public offering costs paid	--	--	--	--	(63,905)
Net cash provided by (used in) financing activities	(874,462)	(105,099)	6,992,845	6,397,861	2,515,315
Effect of exchange rate changes on cash	30,572	(31,505)	66,204	(57,867)	(137,363)
Increase (decrease) in cash and cash equivalents	(381,191)	249,818	1,439,282	731,071	(247,173)
Cash and cash equivalents at beginning of period	1,088,144	706,953	956,771	956,771	2,396,053
Cash and cash equivalents at end of period	$ 706,953	$ 956,771	$ 2,396,053	$1,687,842	$ 2,148,880
Supplemental disclosures of cash flow information:					
Cash paid for interest	$ 227,747	$ 241,002	$ 671,452	$ 392,414	$ 634,089
Cash paid for income taxes	$ 761,251	$ 1,128,929	$ 686,675	$ 617,076	$ 697,049

See accompanying notes to consolidated financial statements.

(1) ORGANIZATION

On March 15, 1996, HAI Acquisition Corp. and its subsidiary, Guell Limited, purchased certain assets and assumed certain liabilities of the former Harvard Apparatus, Inc. and its subsidiary in the United Kingdom, Harvard Apparatus, Ltd. (the "Purchase"). For cash consideration of approximately $3,342,000 (including $342,000 of acquisition related expenses). The costs of the acquisition were allocated based on the fair market value of the assets acquired. The assets acquired consisted principally of cash of $441,000, accounts receivable of $1,397,000, inventories of $1,661,000, miscellaneous prepaid assets of $241,000, fixed assets of $846,000, and catalog costs of $366,000. The Company assumed liabilities of approximately $1,605,000. The acquisition was financed principally by issuing preferred stock of $1,500,000 and debt of $1,750,000. Assets acquired at the time of the purchase included 79% of the capital stock of Ealing Scientific Ltd. (Canada) and Ealing S.A.R.L., now Harvard Apparatus S.A.R.L. (France). The remainder of the capital stock of Ealing Scientific Ltd. and Ealing S.A.R.L. was also acquired directly from the stockholder at the time of the Purchase. After the date of the Purchase, HAI Acquisition Corp. and Guell Limited legally changed their names to Harvard Apparatus, Inc. and Harvard Apparatus, Ltd., respectively.

The Company manufactures and distributes syringe pumps, ventilators, cell injectors, diffusion chambers and other products principally used in the toxicology, metabolism and efficacy testing of new drugs, as well as spectrophotometers and amino acid analyzers primarily used in molecular biology which are manufactured by Biochrom Ltd., a wholly owned subsidiary acquired during 1999.

(2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

(A) PRINCIPLES OF CONSOLIDATION

The consolidated financial statements include the accounts of Harvard Apparatus, Inc. and its subsidiaries. All intercompany balances and transactions have been eliminated in consolidation.

(B) INTERIM CONSOLIDATED FINANCIAL STATEMENTS

The interim consolidated financial statements for the nine months ended September 30, 1999 are unaudited. In the opinion of management, all adjustments, consisting only of normal recurring adjustments, necessary for the fair presentation of the financial position and results of operations have been included in such unaudited consolidated financial statements. The results of operations for the nine months ended September 30, 2000 are not necessarily indicative of the results to be expected for the entire year.

(C) CASH AND CASH EQUIVALENTS

For purposes of the consolidated statements of cash flows, the Company considers all highly liquid instruments with original maturities of three months or less to be cash equivalents.

(D) INVENTORIES

Inventories are stated at the lower of cost or market. Cost is determined using a standard costing system which approximates the first-in, first-out (FIFO) method.

(2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(E) PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment are stated at cost. Equipment under capital leases is stated at the present value of the minimum lease payments at the lease agreement date. Property, plant and equipment is depreciated using the straight-line method over the estimated useful lives of the assets as follows:

Buildings	40 years
Machinery and equipment	3-10 years
Computer equipment	3-7 years
Furniture and fixtures	5-10 years
Automobiles	4-6 years

(F) CATALOG COSTS

Significant costs of product catalog design, development and production are capitalized and amortized over the expected useful life of the catalog (usually two to three years). Costs of drawings and design that were acquired at the purchase on March 15, 1996 are being amortized over their estimated useful life of six years.

(G) INCOME TAXES

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates expected to be applied to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

(H) FOREIGN CURRENCY TRANSLATION

All assets and liabilities of the Company's foreign subsidiaries are translated at exchange rates in effect at year-end. Income and expenses are translated at rates which approximate those in effect on the transaction dates. The resulting translation adjustment is recorded as a separate component of stockholders' equity in other comprehensive income.

(I) STOCK OPTIONS

The Company accounts for stock options granted to employees in accordance with the requirements of Statement of Financial Accounting Standards (SFAS) No. 123, ACCOUNTING FOR STOCK-BASED COMPENSATION. As is permitted by this Statement, the Company has elected to account for stock options in accordance with the provisions of APB Opinion No. 25, ACCOUNTING FOR STOCK ISSUED TO EMPLOYEES and provide the additional disclosures that are required by SFAS No. 123.

(2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(J) USE OF ESTIMATES

The preparation of financial statements in conformity with generally accepted accounting principles requires the use of management's estimates. Such estimates include the determination and establishment of certain accruals and provisions, including those for inventory obsolescence, catalog cost amortization and reserves for bad debts. Actual results could differ from those estimates.

(K) REVENUE RECOGNITION

The Company recognizes revenue from product sales at the time of shipment. Product returns are estimated and provided for based on historical experience.

(L) GOODWILL

Goodwill, which represents the excess of purchase price over fair value of net assets acquired, is amortized on a straight-line basis over the expected periods to be benefited, ranging from 5 to 15 years. The Company continually evaluates whether events or circumstances have occurred that indicate that the remaining useful life of goodwill may warrant revision or that the remaining balance may not be recoverable. When factors indicate that goodwill should be evaluated for possible impairment, the Company estimates the undiscounted cash flow of the business segment, net of tax, over the remaining life of the asset in determining whether the asset is recoverable. Charges for impairment of goodwill would be recorded to the extent unamortized book value exceeds the related future discounted cash flow, net of tax. The discount factor would be the long-term debt rate currently obtainable by the Company.

(M) IMPAIRMENT OF LONG-LIVED ASSETS AND LONG-LIVED ASSETS TO BE DISPOSED OF

The Company uses the provisions of SFAS No. 121, ACCOUNTING FOR THE IMPAIRMENT OF LONG-LIVED ASSETS AND FOR LONG-LIVED ASSETS TO BE DISPOSED OF. This statement requires that long-lived assets and certain identifiable intangibles be reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to undiscounted future net cash flows expected to be generated by the asset. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the fair value of the assets. Assets to be disposed of are reported at the lower of the carrying amount or fair value less costs to sell.

(N) EFFECT OF ACCOUNTING CHANGES

In 1998, the Financial Accounting Standards Board issued SFAS 133, ACCOUNTING FOR DERIVATIVE INSTRUMENTS AND HEDGING ACTIVITIES. SFAS 133, which was deferred through the issuance of SFAS 137 and subsequently amended by SFAS 138, is effective for fiscal years beginning after June 15, 2000. SFAS 133 will be adopted on January 1, 2001. Its impact on the consolidated financial statements is still being evaluated, but is not expected to be material.

(2) SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

(O) FAIR VALUE OF FINANCIAL INSTRUMENTS

The carrying value of the Company's cash and cash equivalents, trade accounts receivable, trade accounts payable and accrued expenses approximate their fair values because of the short maturities of those instruments. The carrying value of the Company's debt approximates its fair value because of the short maturities and/or interest rates which are comparable to those available to the Company on similar terms.

(3) ACQUISITION OF BUSINESSES

On June 30, 1998, the Company acquired certain assets of Medical Systems Corporation, a manufacturer and product developer of research medical equipment. Cash consideration of approximately $1,000,000 plus certain acquisition costs was paid for the assets. The costs of the acquisition were allocated on the basis of the estimated fair market value of the assets acquired. The net purchase price resulted in an allocation of $784,047 to goodwill and $281,506 to tangible net assets.

On February 26, 1999, the Company acquired substantially all of the assets and certain liabilities of Pharmacia Biotech (Biochrom) Ltd. ("Biochrom"), a UK manufacturer and developer of spectrophotometers, amino acid analyzers and other related research equipment. Cash consideration of approximately $6,981,000 (including $502,000 of acquisition related expenses) was paid for the assets. The costs of the acquisition allocated on the basis of estimated fair market value of the assets acquired using the purchase method of accounting resulted in an allocation of $5,446,000 to goodwill and other intangibles. The assets acquired consisted of approximately $61,000 of accounts receivable, $1,039,000 of inventory, $100,000 of prepaid expenses, $612,000 of fixed assets, $372,000 of pension assets and liabilities assumed totaled approximately $649,000.

On September 10, 1999, the Company acquired certain assets of Clark Electromedical Instruments, a manufacturer of glass capillaries and distributor of research equipment. Cash consideration of approximately $349,000 was paid for the assets. The costs of the acquisition allocated on the basis of estimated fair market value of the assets acquired using the purchase method of accounting resulted in an allocation of $288,000 to goodwill and other intangibles.

On November 19, 1999, the Company acquired the NaviCyte diffusion chamber systems product line from NaviCyte, a wholly-owned subsidiary of Trega Biosciences, Inc. Cash consideration of approximately $390,000 (including $33,000 of acquisition related expenses) was paid for the assets. The costs of the acquisition allocated on the basis of estimated fair market value of the assets acquired and the purchase method of accounting resulted in an allocation of $333,000 to goodwill and other intangibles.

On November 30, 1999, the Company acquired substantially all of the assets and certain liabilities of Hugo Sachs Elektronik a developer and manufacturer of perfusion systems for research. Cash consideration of approximately $568,000 was paid for the assets, net of cash acquired of $31,000. The costs of the acquisition allocated on the basis of estimated fair market value of the assets acquired and the purchase method of accounting resulted in an allocation of $89,000 to goodwill and other intangibles.

(3) ACQUISITION OF BUSINESSES (CONTINUED)

On May 19, 2000, the Company acquired substantially all of the assets of Biotronik, a manufacturer of Amino Acid Analyzers. Cash consideration of approximately $469,000 was paid for the assets (including approximately $12,000 of acquisition related expenses). The cost of the acquisition was allocated on the basis of fair market value of the assets acquired and the purchase method of accounting resulted in an allocation of $335,000 to goodwill.

On July 14, 2000, the Company acquired substantially all of the assets of Amika Corporation, a manufacturer and distributor of sample preparation devices and consumables. Cash consideration of $3,096,000 was paid for the assets including approximately $61,000 of acquisition related expenses. The cost of the acquisition allocated on the basis of fair market value of the assets acquired and the purchase method of accounting resulted in an allocation of $3,011,000 to goodwill and other intangibles. The assets acquired consisted of approximately $85,000 of inventory. In addition, the Company acquired the right of first refusal to all new technologies developed and offered for sale by the predecessor Company for a period of four years on a fair value licensing arrangement.

All acquisitions have been accounted for by the purchase method of accounting for business combinations. Accordingly, the accompanying consolidated statements of operations do not include any revenues or expenses related to these acquisitions prior to the respective acquisition dates.

The following unaudited pro forma results of operations gives effect to the acquisition of Biochrom as if it had occurred at the beginning of fiscal 1998 (the effect of the other acquisitions are considered insignificant). Such pro forma information reflects certain adjustments including amortization of goodwill, interest expense, income tax effect and an increase in the number of weighted average shares outstanding. The pro forma information does not necessarily reflect the results of operations that would have occurred had the acquisition taken place as described and is not necessarily indicative of results that may be obtained in the future.

	YEARS ENDED DECEMBER 31,	
	1998	1999
	(UNAUDITED)	
Pro forma revenues	$23,942,973	$ 27,590,714
Pro forma net earnings (loss)	$ (120,186)	$(29,415,046)
Pro forma basic net earnings (loss) per share:		
Basic	$ (0.04)	$ (5.25)
Diluted	$ (0.04)	$ (5.25)
Pro forma weighted average common shares:		
Basic	5,598,626	5,598,626
Diluted	5,598,626	5,598,626

(4) INVENTORIES

Inventories consist of the following:

	DECEMBER 31,		SEPTEMBER 30,
	1998	1999	2000
Finished goods	$ 686,555	$ 857,202	$1,194,810
Work in process	335,150	359,505	448,744
Raw materials	634,613	1,632,963	2,036,181
	$1,656,318	$2,849,670	$3,679,735

(5) PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment consists of the following:

	DECEMBER 31,		SEPTEMBER 30,
	1998	1999	2000
Land and buildings	$ 654,172	$ 636,250	$ 576,366
Machinery and equipment	126,891	726,933	913,617
Computer equipment	103,218	378,400	398,639
Furniture and fixtures	234,882	326,978	348,022
Automobiles	190,354	123,113	122,051
	1,309,517	2,191,674	2,358,695
Less accumulated depreciation	339,612	631,752	845,597
	$ 969,905	$1,559,922	$1,513,098

(6) SHORT-TERM DEBT

At September 30, 2000, December 31, 1999 and 1998, short-term debt consisted of an amount outstanding under a bank line of credit that is secured by a first priority security interest in all assets of the Company and a pledge of 65% of the capital stock of the Company's subsidiaries. Interest on the line of credit is payable monthly, in arrears, at the related bank's "base rate" plus 1% (10.5%, 9.5% and 8.75% at September 30, 2000, December 31, 1999 and 1998, respectively). Borrowings under the line of credit are limited to an available amount determined by an accounts receivable and inventory based formula, $3,750,000, $3,750,000 and $2,000,000 at September 30, 2000, December 31, 1999 and 1998, respectively. This line of credit is due to mature on January 29, 2002. At September 30, 2000, December 31, 1999 and 1998, borrowings under the line of credit were $3,150,000, $2,200,000 and $700,000, respectively.

At December 31, 1998, short-term debt also included a note from the same bank in the amount of $350,000 with interest payable monthly, in arrears at the bank's "base rate" plus 1.5% (9.25%). This debt was rolled into long-term debt on March 2, 1999 as part of the financing arrangement to acquire Biochrom in March 1999 (see notes 3 and 7).

(7) LONG-TERM DEBT

Long-term debt consists of the following:

	DECEMBER 31,		SEPTEMBER 30,
	1998	1999	2000
Subordinated debentures, at 13%, payable in quarterly installments through March 15, 2003	$787,500	$ 727,500	$ 477,500
Notes payable	--	5,125,000	6,800,000
Capital lease obligations (note 10)	41,355	14,614	9,431
	828,855	5,867,114	7,286,931
Less current installments	190,389	794,173	1,556,618
	$638,466	$5,072,941	$ 5,730,313

On March 2, 1999, the Company entered into two loan agreements with two banks to borrow up to $5.5 million. The purpose of the loan agreements was to partially finance the acquisition of Biochrom (see note 3). Principal and interest are being paid in quarterly installments, with the final payment due in January 2002. The interest rate is determined by one of the banks base rate plus 1%, (10.5% and 9.5% at September 30, 2000 and December 31, 1999, respectively). The loans are secured by substantially all of the Company's assets. The loan agreements contain covenants relating to net income, debt service coverage and cash flow coverage. At September 30, 2000 and December 31, 1999, the Company was not in compliance with certain of its covenants. The Company has either received waivers from its banks or had the covenants amended by its banks.

Financing costs of $221,074 were incurred in 1999. These costs were capitalized and are being amortized over the term of the loans. Amortization expense was $56,102 for the nine months ended September 30, 2000 and $63,442 for the year ended December 31, 1999.

Aggregate annual principal payments on all long-term debt, excluding capital lease obligations, for the next five years and thereafter at September 30, 2000 are as follows:

2001	$ 1,550,004
2002	4,449,996
2003	777,500
2004	500,000
Thereafter	--
	$ 7,277,500

(8) CONVERTIBLE AND REDEEMABLE PREFERRED STOCK

During 1999, 48,500 shares of Series B convertible and redeemable preferred stock were issued to partially finance the acquisition of Biochrom (note 3). The net proceeds from this issuance were $925,174. The Company's Series B convertible redeemable preferred stock has a dividend preference over the Series A preferred stock, and as a result, no dividends shall be paid in respect of shares of

(8) CONVERTIBLE AND REDEEMABLE PREFERRED STOCK (CONTINUED)
Series A preferred stock unless all accrued dividends that become payable in respect of Series B preferred stock have been paid. The Series B redeemable convertible preferred stock is convertible at the option of the holder, at any time, into shares of common stock of the Company at a conversion rate of 19.71 shares of common stock for each share of Series B redeemable convertible preferred stock, subject to adjustment for subdivision of Series B preferred stock or any issuance of additional shares of Series B preferred stock.

Redeemable preferred Series A stock pays quarterly cumulative dividends in arrears at a rate of approximately $0.26 per share. On March 3, 2000, convertible and redeemable preferred "B" stock started to accrue dividends at a rate of $1.44 that will be payable a year in arrears on March 3, 2001, and thereafter quarterly in arrears.

In the event of any liquidation of the Company, the holders of the Company's redeemable preferred stock are entitled to be paid from the assets available for distribution to holders of the Company's capital stock $2,500,000, plus any related dividends that are accrued but unpaid at such time, prior to other stock distributions.

Mandatory redemption requirements for the preferred stock are as follows:

	SERIES "A"	SERIES "B"
March 15, 2002	$ 500,000	$ 333,320
March 15, 2003	500,000	333,320
March 15, 2004	500,000	333,320
	$1,500,000	$1,000,000

(9) COMMON STOCK WARRANTS

At September 30, 2000, December 31, 1999 and 1998, there were outstanding 8,509,905 warrants, which enable the holders to purchase a like amount of the Company's common stock for $0.0005 per share. The warrants were issued in connection with the issuance of Series A redeemable preferred stock (6,046,510 warrants) and subordinated debentures (2,463,395 warrants) that occurred on March 15, 1996.

Commencing on March 15, 2002, the holders of the warrants may at any time require the Company to repurchase the warrants, or any common shares previously acquired from exercise of the warrants, for their fair market value as determined in good faith by the Company's board of directors. Such repurchase price would be repaid in 12 equal quarterly installments beginning on the first business day of the month following the surrender of the warrants or applicable shares of common stock. In 1999, 1998 and 1997 and for the nine months ended September 30, 2000 and 1999, $29,694,019, $1,379,460, $116,574, $70,920,242 and $7,402,457, respectively, has been recorded as interest expense to accrue the estimated amount of this potential liability in accordance with EITF 96-13, ACCOUNTING FOR DERIVATIVE FINANCIAL INSTRUMENTS INDEXED TO AND POTENTIALLY SETTLED IN, A COMPANY'S OWN STOCK. Future changes in the fair value of common stock warrants will also be recorded as interest expense.

In September 2000, the holders of the warrants agreed to automatically terminate the requirement of the Company to repurchase the warrants in the event of an initial public offering of the Company's Common Stock.

(10) LEASES

The Company leases automobiles under various leases that are classified as capital leases. The carrying value of automobiles under capital leases at September 30, 2000, December 31, 1999 and 1998 was $9,502, $14,532 and $40,795, respectively, which is net of $48,871, $68,602 and $76,352, respectively, of accumulated depreciation.

The Company has noncancelable operating leases for office and warehouse space expiring at various dates through 2009. Rent expense for the nine months ended September 30, 2000 and for the years ended December 31, 1999, 1998 and 1997 was approximately $439,000, $484,000, $134,000 and $151,262, respectively.

Future minimum lease payments for both capital and operating leases, with initial or remaining terms in excess of one year at September 30, 2000, are as follows:

	CAPITAL LEASES	OPERATING LEASES
2001	$ 9,116	$ 660,861
2002	1,157	417,710
2003	--	372,238
2004	--	352,806
2005 and thereafter	--	--
Net minimum lease payments	10,273	$1,803,615
Less amount representing interest	842	
Present value of net minimum lease payments	$ 9,431	

(11) RELATED PARTY TRANSACTIONS

The Company paid an annual consulting fee to a former stockholder who formerly served on its board of directors and, by written agreement, provided no less than five days of consulting services each month. The agreement was scheduled to expire on March 15, 2001 or at the time of any initial public offering of the Company's stock or other sale of a material portion of the Company's stock or assets, if such a transaction occurred before that date. As of September 30, 2000, the agreement with the former stockholder was rescinded. The related consulting expense amounted to $294,583 for the nine months ended September 30, 2000 and $258,437, $262,040 and $268,030 for the years ended December 31, 1999, 1998 and 1997, respectively.

(12) EMPLOYEE BENEFIT PLANS

The Company sponsors a profit sharing retirement plan for its U.S. employees, which includes an employee savings plan established under Section 401(k) of the U.S. Internal Revenue Code. The plan covers substantially all full-time employees who meet certain eligibility requirements. Contributions to the profit sharing retirement plan are at the discretion of management. For the nine months ended September 30, 2000 and for the years ended December 31, 1999, 1998 and 1997, the Company contributed approximately $60,000, $67,000, $41,000 and $27,000, respectively, to the plan.

(12) EMPLOYEE BENEFIT PLANS (CONTINUED)

Certain of the Company's subsidiaries in the United Kingdom (UK), Harvard Apparatus Limited, and Biochrom Limited maintain contributory, defined benefit pension plans for substantially all of their employees.

The components of the Company's pension expense, primarily for Biochrom, for the nine months ended September 30, 2000 and for the year ended December 31, 1999 follow:

	DECEMBER 31, 1999	SEPTEMBER 30, 2000
Components of net periodic benefit cost:		
Service cost	$ 288,640	$ 182,376
Interest cost	250,437	197,263
Expected return on plan assets	(364,684)	(291,771)
Net amortization gain	6,965	(9,364)
Net periodic benefit cost	$ 181,358	$ 78,504

(12) EMPLOYEE BENEFIT PLANS (CONTINUED)

The funded status of the Company's defined benefit pension plans and the amount recognized in the balance sheet at September 30, 2000 and December 31, 1999 follow:

	DECEMBER 31, 1999	SEPTEMBER 30, 2000
Change in benefit obligation:		
Balance at beginning of period	$1,215,000	$5,829,403
Acquisitions	4,848,552	--
Service cost	288,640	182,376
Interest cost	250,437	197,263
Participants' contributions	60,745	45,931
Actuarial (gain)/loss	(824,672)	571,532
Benefits paid	(9,299)	(42,993)
Currency translation adjustment	--	(594,437)
Balance at end of period	5,829,403	6,189,075
Change in fair value of plan assets:		
Balance at beginning of period	1,158,138	7,062,645
Acquisitions	5,231,470	--
Actual return on plan assets	440,606	(39,627)
Participants' contributions	60,745	45,931
Employer contributions	180,985	153,275
Benefits paid	(9,299)	(42,993)
Currency translation adjustment	--	(673,592)
Balance at end of period	7,062,645	6,505,639
Funded status:		
Plan assets greater than benefit obligation	1,233,242	316,564
Unrecognized (gain) loss	(881,299)	73,808
Prepaid pension expense in consolidated balance sheet	$ 351,943	$ 390,372

The weighted average assumptions used in determining the net pension cost for the Company's plans follows:

	DECEMBER 31, 1999	SEPTEMBER 30, 2000
Weighted average assumptions:		
Discount rate	5.5%	6.5-8.5%
Expected return on assets	7.0-8.0%	7.0-8.0%
Rate of compensation increase	3.8-4.0%	4.5%

(13) INCOME TAXES

The significant components of the Company's deferred tax assets and liabilities at September 30, 2000, December 31, 1999 and 1998 are as follows:

	DECEMBER 31,		SEPTEMBER 30,
	1998	1999	2000
Deferred tax assets:			
Accounts receivable	$ --	$ 31,755	$ 31,755
Inventory	111,676	129,097	141,113
Operating loss carryforward	28,182	34,417	387,188
Accrued expenses	(14,940)	1,196,338	135,398
Goodwill	--	37,679	46,567
Catalog costs	--	8,503	--
Total deferred tax assets	124,918	1,437,789	742,021
Deferred tax liabilities:			
Catalog costs	24,524	--	6,011
Pension fund asset	15,051	18,461	16,725
Property, plant and equipment	22,053	42,632	36,278
Other	497	4,695	--
Total deferred tax liabilities	62,125	65,788	59,014
Net deferred tax assets	$ 62,793	$1,372,001	$ 683,007

In assessing the realizability of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. Based upon the level of historical taxable income and projections for future taxable income over the periods during which deferred tax assets are deductible, management believes it is more likely than not that the Company will realize the benefits of these deductible differences.

Income tax expense is based on the following pre-tax income (loss) for the nine months ended September 30, 2000 and for the years ended December 31, 1999, 1998 and 1997:

	DECEMBER 31,			SEPTEMBER 30,
	1997	1998	1999	2000
Domestic	$1,253,916	$115,418	$(32,040,219)	$(83,771,998)
Foreign	535,621	738,916	2,757,782	1,264,808
	$1,789,537	$854,334	$(29,282,437)	(82,507,190)

(13) INCOME TAXES (CONTINUED)

Income tax expense (benefit) for the nine months ended September 30, 2000 and for the years ended December 31, 1999, 1998 and 1997 consisted of:

	DECEMBER 31,			SEPTEMBER 30,
	1997	1998	1999	2000
Current income tax expense:				
Federal and state	$ 584,239	$579,152	$ 403,149	$ --
Foreign	208,103	214,112	1,043,539	506,532
	792,342	793,264	1,446,688	506,532
Deferred income tax (benefit) expense:				
Federal and state	(56,939)	(19,380)	(1,238,399)	840,106
Foreign	(53,074)	9,308	(70,809)	7,713
	(110,013)	(10,072)	(1,309,208)	847,819
Total income tax expense	$ 682,329	$783,192	$ 137,480	$ 1,354,351

(13) INCOME TAXES (CONTINUED)

Income tax expense for the nine months ended September 30, 2000 and for the years ended December 31, 1999, 1998 and 1997 differed from the amount computed by applying the U.S. federal income tax rate of 34% to pretax income as a result of the following:

	DECEMBER 31,			SEPTEMBER 30,
	1997	1998	1999	2000
Computed "expected" income tax (benefit) expense.....	$608,443	$ 290,474	$ (9,956,029)	$(28,052,445)
Increase (decrease) in income taxes resulting from:				
Foreign tax rate and regulation differential.....	(3,625)	(27,811)	35,804	85,909
State income taxes, net of federal income tax benefit.....	73,757	86,068	(154,569)	130,804
Interest expense (common stock warrants).....	39,564	469,002	10,254,946	24,177,992
Foreign Subsidiary Corporation tax benefits.....	--	(27,804)	(28,761)	(32,876)
Other.....	9,220	(6,737)	(13,911)	7,698
Stock compensation expense in excess of allowable tax benefits on exercise of options.....	--	--	--	5,037,269
Decrease in deferred tax valuation allowance.....	(45,030)	--	--	--
Total.....	$682,329	$ 783,192	$ 137,480	$ 1,354,351

Undistributed earnings of the Company's foreign subsidiaries amounted to approximately $4,013,000, $3,185,000 and $1,565,000 at September 30, 2000, December 31, 1999 and 1998, respectively. Those earnings are considered to be indefinitely reinvested and, accordingly, no related provision for U.S federal and state income taxes has been provided. Upon distribution of those earnings in the form of dividends or otherwise, the Company will be subject to both U.S. income taxes (subject to an adjustment for foreign tax credits) and withholding taxes in the various foreign countries.

(14) STOCK OPTION PLAN

The Company has adopted a stock option plan (the "Plan") pursuant to which the Company's Board of Directors may grant stock options to employees. The Plan authorizes grants of options to purchase up to 4,072,480 shares of authorized but unissued stock.

For the nine months ended September 30, 2000, and for the years ended December 31, 1999 and 1998, 2,254,272, 1,119,725 and 1,119,725 "Incentive Stock Options," and 1,812,295, 1,812,295 and 895,780 "Non-qualified Stock Options," respectively, had been granted to employees. The Incentive Stock Options become fully vested over a four year period, on a pro rata basis. The Non-qualified

(14) STOCK OPTION PLAN (CONTINUED)

Stock Options granted prior to 1999 only become vested if, prior to the end of the year 2000: a sale of substantially all of the Company's assets or capital stock occurs; or an initial public offering of the Company's common stock at a net price of not less than $1.42 per share; or the fair market value of the Company's common stock is otherwise determined to be, on a fully diluted basis, not less than $1.42 per common share. For non-qualified options granted under the plan during 1999, prior to an amendment to the plan dated September 29, 2000, the options were deemed to be vested and exercisable upon either (i) the sale of all or substantially all of the assets or capital stock of the Company for an actual or implied price per share of not less than $2.09 or (ii) an initial public offering of the Company's stock with a price per share of not less than $2.09 and gross proceeds to the Company of at least $15 million. On September 29, 2000, the vesting schedule was amended so that the options are vested and exercisable upon either (i) a sale of all or substantially all of the assets or capital stock of the Company for an actual or implied net price per share of Common Stock of not less than $2.09 or (ii) if the fair market value of the Company at any time prior to December 31, 2000 results in a per share valuation, on a fully diluted basis, of not less than $2.09 per share. As a result of the Plan amendment, the related options vested immediately as a per share valuation of $2.09 was attained.

The Company applies APB Opinion No. 25 in accounting for the Plan. APB No. 25 requires no recognition of compensation expense for stock option awards when on the date of grant the exercise price is equal to the estimated fair market value of the Company's common stock and the number of options granted is fixed. During the nine months ended September 30, 2000, 1,134,547 stock options were granted to employees at an exercise price of $1.05 which was estimated to be less than the fair market value of the Company's common stock on the date of grant. Accordingly, compensation expense of $3,292,593 was recognized on these stock option grants. Additional compensation expense will be recognized in future periods over the four year vesting period of the options. The Company's 1996 and 1999 Non-qualified Stock Option awards are considered variable awards as the number of shares to be acquired by the employees is indeterminable at the date of grant. Accordingly, in 1999 and for the nine months ended September 30, 1999, the Company recognized compensation expense of $3,283,164 and $937,138, respectively, on the non-qualified Stock Options granted in 1996. At December 31, 1999, all non-qualified stock options granted in 1996 were fully vested because a per share valuation of $1.42 was attained. For the nine months ended September 30, 2000, the Company recognized compensation expense of $10,039,350 on the non-qualified options granted in 1999.

On September 29, 2000, two employees exercised 563,942 non-vested options that were granted during 2000 for 563,942 shares of restricted common shares for cash consideration of $286 and two promissory notes amounting to $589,652 payable to the Company. The notes have a three-year maturity and a fixed interest rate of 10% per annum, compounded annually. The restricted stock becomes fully vested over a four-year period, on a pro rata basis. The estimated fair market value of the shares awarded on the original option date grant and on the date of exercise was estimated to be $6,767,310 of which $2,412,865 has been recognized as stock compensation expense for the nine months ended September 30, 2000. The remaining unearned compensation is being amortized to expense over the four year vesting period. Also on September 29, 2000, two employees of the Company exercised 916,514 fully vested options for cash of $465 and two promissory notes amounting to $958,298 payable to the Company. The notes have a three-year maturity and a fixed interest rate of 10% per annum, compounded annually.

(14) STOCK OPTION PLAN (CONTINUED)

The following is a summary of stock option activity.

	EMPLOYEE STOCK OPTIONS	
	OPTIONS OUTSTANDING	WEIGHTED AVERAGE EXERCISE PRICE
Balance at December 31, 1996	1,903,533	$0.0005
Options granted	111,972	0.0147
Balance at December 31, 1997	2,015,505	0.0152
Options granted	--	--
Balance at December 31, 1998	2,015,505	0.0152
Options granted	916,515	1.0462
Balance at December 31, 1999	2,932,020	0.3278
Options exercised	(3,467,955)	0.4475
Options granted	1,134,547	1.0462
Balance at September 30, 2000	598,612	$0.9980

During 1999, 1998 and 1997 and the first nine months of 2000, there were no other additional options exercised, canceled, expired or forfeited, or changes in any option terms, including exercise prices. The weighted-average fair value of options granted during the nine months ended September 30, 2000 and fiscal 1999 and 1997 was $9.73, $1.05 and $0.01, respectively. No options were granted during 1998.

The following is a summary of information relating to stock options outstanding at September 30, 2000 (no options were exercisable at September 30, 2000):

	OPTIONS OUTSTANDING		
RANGE OF EXERCISE PRICE	NUMBER OUTSTANDING AT SEPTEMBER 30, 2000	WEIGHTED-AVERAGE REMAINING CONTRACTUAL LIFE	WEIGHTED AVERAGE EXERCISE PRICE
$ 0.01	28,008	6.3 years	$ 0.01
$ 1.05	570,605	9.5 years	1.05
$ 0.01-$1.05	598,613	9.4 years	$ 1.00

(14) STOCK OPTION PLAN (CONTINUED)

Had the Company determined compensation cost based on the fair value of the options at the grant date, as is permitted by SFAS No. 123, the Company's net income would have been as follows:

	YEARS ENDED DECEMBER 31,			NINE MONTHS ENDED SEPTEMBER 30,
	1997	1998	1999	2000
Net income (loss) as reported	$1,107,208	$71,142	$(29,419,917)	$(83,861,541)
Pro forma net income (loss)	$1,106,988	$70,922	$(29,420,033)	$(83,926,155)
Basic net income (loss) per share	$ 0.13	$ (0.01)	$ (5.28)	$ (13.11)
Pro forma basic net income (loss) per share	$ 0.13	$ (0.01)	$ (5.28)	$ (13.12)
Diluted net income (loss) per share	$ 0.06	$ (0.01)	$ (5.28)	$ (13.11)
Diluted pro forma net income (loss) per share	$ 0.06	$ (0.01)	$ (5.28)	$ (13.12)

The fair value of each option grant for the Company's plans is estimated on the date of the grant using the minimum value pricing model, with the following weighted average assumptions used for grants in 2000, 1999 and 1997. There were no grants of options in 1998.

	DECEMBER 31,		SEPTEMBER 30,
	1997	1999	2000
Risk free interest rates	6.4%	5.6%	6.1%
Expected option lives	7 years	7 years	2 years
Expected dividend yields	0%	0%	0%

(15) SEGMENT AND RELATED INFORMATION

The Company operates in one significant business segment.

Revenues by geographic area consists of the following:

	YEARS ENDED			NINE MONTHS ENDED	
	DECEMBER 31, 1997	DECEMBER 31, 1998	DECEMBER 31, 1999	SEPTEMBER 30, 1999	SEPTEMBER 30, 2000
				(UNAUDITED)	
United States	$ 6,263,264	$ 7,347,907	$ 8,169,470	$ 6,266,620	$ 6,867,515
United Kingdom	2,668,300	2,458,772	15,353,761	10,344,187	11,549,083
Canada and Europe	2,532,593	2,347,346	2,654,583	1,859,106	3,652,428
	$11,464,157	$12,154,025	$26,177,814	$18,469,913	$22,069,026

(15) SEGMENT AND RELATED INFORMATION (CONTINUED)

Long lived assets by geographic area consists of the following:

	DECEMBER 31, 1998	DECEMBER 31, 1999	SEPTEMBER 30, 2000
United States	$260,977	$ 307,286	$ 259,430
United Kingdom	677,889	1,189,269	1,197,896
Canada and Europe	31,039	63,367	55,772
	$969,905	$1,559,922	$1,513,098

(16) INCOME (LOSS) PER SHARE

Basic income (loss) per share is based upon net income less dividends on preferred stock divided by the weighted average common shares outstanding during each year. The calculation of diluted net income (loss) per share assumes conversion of convertible preferred stock, stock options and common stock warrants into common stock, and also adjusts net income (loss) for the effect of converting convertible preferred stock and common stock warrants into common stock. Net income (loss) and shares used to compute net income per share, basic and diluted, are reconciled below:

	YEARS ENDED			NINE MONTHS ENDED	
	DECEMBER 31, 1997	DECEMBER 31, 1998	DECEMBER 31, 1999	SEPTEMBER 30, 1999	SEPTEMBER 30, 2000
				(UNAUDITED)	
Net income (loss) available to common shareholders	$ 985,540	$ (50,524)	$(29,576,503)	$(6,321,331)	$(83,983,969)
Effect of dilutive securities:					
Common stock warrants	116,574	--	--	--	--
Net income (loss), assuming dilution	$1,102,114	$ (50,524)	$(29,576,503)	$(6,321,331)	$(83,983,969)
Weighted average common shares outstanding during the year	7,406,486	5,598,626	5,598,626	5,598,626	6,407,682
Effect of dilutive securities:					
Common stock warrants	8,509,911	--	--	--	--
Common stock options	1,583,797	--	--	--	--
	17,500,194	5,598,626	5,598,626	5,598,626	6,407,682

For the years ended December 31, 1999 and 1998, and for the nine months ended September 30, 2000 and 1999, common equivalent shares of 11,378,110, 9,688,766, 10,628,401 and 11,446,996, respectively, resulting from stock options, warrants and restricted stock were not included in the computation of diluted earnings per share because to do so would have been antidilutive.

(17) ACCRUED EXPENSES

Accrued expenses consist of:

	DECEMBER 31,		SEPTEMBER 30,
	1998	1999	2000
Accrued compensation and payroll	$392,066	$ 736,021	$ 955,543
Accrued interest	8,062	158,101	153,682
Accrued legal and professional fees	128,812	251,926	720,599
Other	57,349	253,475	436,723
	$586,289	$1,399,523	$2,266,547

(18) CONTINGENCIES

The Company is subject to legal proceedings and claims arising out of its normal course of business. Management, after review and consultation with counsel, considers that amounts accrued for in connection therewith are adequate.

(19) CONCENTRATION OF CREDIT RISK

One commercial customer accounted for 44% of revenues for the year ended December 31, 1999 and 39% and 41% for the nine months ended September 30, 2000 and 1999, respectively. At September 30, 2000 and 1999, and December 31, 1999, one customer accounted for 41%, 46% and 48% of accounts receivable, respectively. Except as noted above, no other individual customer accounted for more than 10% of revenues for the nine months ended September 30, 2000 and 1999 and for the years ended December 31, 1999, 1998, and 1997. In addition, except as noted above, no other individual customer accounted for more than 10% of account receivable at September 30, 2000, December 31, 1999 and December 31, 1998.

(20) STOCK SPLIT

On October 25, 2000, the Board of Directors approved a merger, subject to stockholder approval, of the Company with and into its wholly-owned subsidiary, Harvard Bioscience, Inc., to be effected prior to the consummation of the anticipated initial public offering ("IPO"). In the merger each share of common stock of the Company will be exchanged for one share of Harvard Bioscience, Inc. The Board of Directors of Harvard Bioscience, Inc. has approved a 19.71:1 stock split effective immediately after consummation of the merger. All common stock share and per share data have been restated in these financial statements for all periods presented to reflect this split.

(21) SUBSEQUENT EVENT

Subsequent to September 30, 2000, 5,913 stock options were granted to employees resulting in deferred compensation of approximately $65,000.

(22) UNASSERTED LEGAL CLAIM (UNAUDITED)

On November 7, 2000 the Company received correspondence from counsel to Harvard University claiming that the Company's use of the term "Harvard Bioscience" and other terms containing or consisting of the term "Harvard" constitutes trademark infringement, false designation of origin, unfair competition and cybersquatting. Counsel to Harvard University has threatened legal action if the Company does not take certain steps, including ceasing and permanently refraining from using these terms. Management denies the allegations contained in the above correspondence, and intends to vigorously seek to protect the Company's rights should such claims be asserted against the Company.

PHARMACIA & UPJOHN (CAMBRIDGE) LIMITED
FORMERLY
PHARMACIA BIOTECH (BIOCHROM) LIMITED

REPORT OF THE DIRECTORS

FOR THE YEAR ENDED 31ST DECEMBER 1998

The Directors present their report and the audited financial statements for the year ended 31st December 1998.

TRADING RESULTS FOR THE YEAR AND OUTLOOK

The trading results for the year are set out on page F-29 of the accounts. The year was satisfactory.

Following the Company's disposal of the majority of its net assets on the 26th February 1999, (note 23), the Company will cease to trade.

PRINCIPAL ACTIVITIES

During the year the Company developed, manufactured and marketed scientific instruments and associated chemicals.

DIRECTORS

The Directors throughout the year were as listed below. None of the Directors holds any beneficial interest in the share capital of the Company.

W.B. Brown	--	Managing	Resigned	01/03/99
J.G. Lee	--		Joined	23/12/98
K.T. Krzywicki	--		Joined	23/12/98

YEAR 2000 AND EUROPEAN MONETARY UNION

As the Company ceased to trade on the 26th February 1999 the directors are satisfied that there are no risks associated with the impact of the Year 2000 date change or European Monetary Union.

RESEARCH AND DEVELOPMENT

It is the Company's policy to carry out research and development to develop products in the fields of spectrophotometry and amino acid analysis. Our objective is the rapid creation of products utilising Biochrom's strengths in electronic, software, optical and mechanical design plus production skills.

Expenditure on research and development is set out in the profit and loss accounts on page F-29.

CLOSE COMPANY PROVISIONS

As far as the Directors are aware the close company provisions of the Income and Corporation Taxes Act 1988 as amended do not apply to the Company. There has been no change in this respect since the end of the financial year.

POST BALANCE SHEET EVENT

Effective 26th February 1999, the Company sold the majority of its net assets to Biochrom Limited.

(See note 23).

PHARMACIA & UPJOHN (CAMBRIDGE) LIMITED
FORMERLY
PHARMACIA BIOTECH (BIOCHROM) LIMITED

REPORT OF THE DIRECTORS

FOR THE YEAR ENDED 31ST DECEMBER 1998

AUDITORS

Our auditors, Coopers & Lybrand, merged with Price Waterhouse on 1 July 1998, following which Coopers & Lybrand resigned and the directors appointed the new firm, PricewaterhouseCoopers, as auditors.

A resolution to reappoint PricewaterhouseCoopers as auditors to the company will be proposed at the annual general meeting.

BY ORDER OF THE BOARD

J.G. LEE
DIRECTOR

PHARMACIA & UPJOHN (CAMBRIDGE) LIMITED

FORMERLY

PHARMACIA BIOTECH (BIOCHROM) LIMITED

YEAR ENDED 31ST DECEMBER 1998

STATEMENT OF DIRECTORS' RESPONSIBILITIES

Company law requires the directors to prepare financial statements for each financial year which give a true and fair view of the state of affairs of the company and of the profit or loss of the company for that period. In preparing these financial statements, the directors are required to:

* Select suitable accounting policies and then apply them consistently;

* Make judgements and estimates that are reasonable and prudent;

* State whether applicable accounting standards have been followed, subject to any material departures disclosed and explained in the financial statements;

* Prepare the financial statements on the going concern basis unless it is inappropriate to presume that the company will continue in business.

The directors are responsible for keeping proper accounting records which disclose with reasonable accuracy at any time the financial position of the company and to enable them to ensure that the financial statements comply with the Companies Act 1985. They are also responsible for safeguarding the assets of the company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

BY ORDER OF THE BOARD

/s/ J.G. Lee
- ---------------------------- Director

9 April 1999
- ---------------------------- Date

REPORT OF THE AUDITORS TO THE MEMBERS OF
PHARMACIA & UPJOHN (CAMBRIDGE) LIMITED

FORMERLY

PHARMACIA BIOTECH (BIOCHROM) LIMITED

REPORT OF INDEPENDENT ACCOUNTANTS

To the Directors of Pharmacia & Upjohn (Cambridge) Limited:

In our opinion, the accompanying balance sheet, profit and loss account and statement of cash flows present fairly, in all material respects, the financial position of Pharmacia & Upjohn (Cambridge) Limited as at 31 December 1997 and 1998 and the profit and loss accounts and cash flows for the years ended 31 December 1997 and 1998 in conformity with generally accepted accounting principles in the United Kingdom, which differ in certain respects from those accepted in the United States (see note 24 to the financial statements).

These financial statements are the responsibility of Pharmacia & Upjohn (Cambridge) Limited's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audit of these statements in accordance with generally accepted auditing standards in the United Kingdom and the United States. These 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, assessing the accounting principles used and significant estimates made by management and evaluating the overall financial statements presentation. We believe that our audit provides a reasonable basis for the opinion expressed above.

PRICEWATERHOUSECOOPERS
Chartered Accountants and Registered Auditors
Cambridge, England
February 26, 1998 (year ended December 31, 1997)
and April 9, 1999 (year ended December 31, 1998),
except for Note 24, which is as of September 15, 2000.

PHARMACIA & UPJOHN (CAMBRIDGE) LIMITED
FORMERLY
PHARMACIA BIOTECH (BIOCHROM) LIMITED
PROFIT AND LOSS ACCOUNT
YEAR ENDED 31ST DECEMBER 1998

	NOTES	1998		1997	
		L	L	L	L
TURNOVER	2		7,101,776		8,699,944
Cost of sales			(5,160,296)		(6,252,278)
GROSS PROFIT			1,941,480		2,447,666
Distribution costs		(457,939)		(421,254)	
Administration costs		(604,918)		(493,374)	
Research and Development costs		(395,569)		(418,000)	
		(1,458,426)		(1,332,628)	
Other operating income	4	48,808		61,019	
NET OPERATING EXPENSES			(1,409,618)		(1,271,609)
OPERATING PROFIT	3		531,862		1,176,057
Interest receivable	5		83,095		114,392
PROFIT ON ORDINARY ACTIVITIES BEFORE TAXATION			614,957		1,290,449
Tax on profit on ordinary activities	6		(194,935)		(444,323)
PROFIT FOR THE YEAR			420,022		846,126
Dividend Paid Net			--		(2,349,827)
PROFIT(LOSS) RETAINED FOR THE YEAR			L420,022		L(1,503,701)

Reserves statement see note 15

All activities are discontinued (note 23).

The company has no recognised gains and losses other than those included in the profits above, and therefore no separate statement of total recognised gains and losses has been presented.

There is no difference between the profit on ordinary activities before taxation and the retained profit for the year stated above and historical cost equivalents.

PHARMACIA & UPJOHN (CAMBRIDGE) LIMITED

FORMERLY

PHARMACIA BIOTECH (BIOCHROM) LIMITED

BALANCE SHEET

31ST DECEMBER 1998

	NOTES	1998		1997	
		L	L	L	L
FIXED ASSETS					
Tangible assets	9		415,900		455,504
CURRENT ASSETS					
Stock	10	636,556		706,141	
Debtors	11	1,603,559		1,537,499	
Cash at bank and in hand		1,545,230		1,026,766	
		3,785,345		3,270,406	
CREDITORS: Amounts falling due within one year	12	888,747		804,784	
NET CURRENT ASSETS			2,896,598		2,465,622
TOTAL ASSETS LESS CURRENT LIABILITIES			L3,312,498		L2,921,126
PROVISIONS FOR LIABILITIES AND CHARGES	13		46,350		75,000
NET ASSETS			L3,266,148		L2,846,126
CAPITAL AND RESERVES					
Called up share capital	14		2,000,000		2,000,000
Profit and loss account	15		1,266,148		846,126
EQUITY SHAREHOLDERS' FUNDS	16		L3,266,148		L2,846,126

The financial statements on pages F-29 to F-43 were approved by the Board of Directors on 9 April 1999 and were signed on its behalf by:

/s/ J.G. Lee
- ---------- Director

9 April 1999
- ---------- Date

PHARMACIA & UPJOHN (CAMBRIDGE) LIMITED

FORMERLY

PHARMACIA BIOTECH (BIOCHROM) LIMITED

CASH FLOW STATEMENT FOR THE YEAR ENDED 31ST DECEMBER 1998

See note 19	1998	1997
	L	L
Operating Activities		
Net cash in flow from operating activities	742,243	1,355,841
RETURNS ON INVESTMENTS AND SERVICING OF FINANCE		
Interest received	81,764	118,918
TAXATION		
UK Corporation Tax paid	(160,915)	(576,323)
Advance Corporation Tax paid	--	(587,457)
	(160,915)	(1,163,780)
CAPITAL EXPENDITURE AND FINANCIAL INVESTMENT		
Purchase of tangible fixed assets	(144,628)	(123,966)
Sale of tangible fixed assets	--	350
	(144,628)	(123,616)
Equity Dividends Paid Net	--	(2,349,827)
INCREASE/(DECREASE) IN CASH IN THE PERIOD	518,464	(2,162,464)

PHARMACIA & UPJOHN (CAMBRIDGE) LIMITED

FORMERLY

PHARMACIA BIOTECH (BIOCHROM) LIMITED

NOTES TO THE ACCOUNTS

YEAR ENDED 31ST DECEMBER 1998

1. ACCOUNTING POLICIES

(a) BASIS OF ACCOUNTING

Although it is intended that the Company shall cease to trade following the sale of its net assets on the 26th February 1999 (note 23), the accounts have been prepared on the going concern basis. This is because in the directors' opinion there is no material difference between the recoverable amounts of the assets and liabilities and their values in the balance sheet. The accounts have been prepared on the historical cost basis and in accordance with applicable Accounting Standards in the United Kingdom. A summary of the more important accounting policies which have been applied consistently is set out below:

(b) DEPRECIATION OF TANGIBLE FIXED ASSETS

The cost of fixed assets is their purchase cost, together with any incidental costs of acquisition.

Depreciation is calculated using the straight line method to write off the fixed assets over their estimated useful lives as follows:

Leasehold improvements	--	7 years
Plant, machinery, equipment and tooling	--	3-7 years
Computer equipment	--	5 years

(c) DEFERRED TAXATION

Provision is made using the liability method for the tax effect of all material timing differences between profits computed for taxation purposes and those stated in the accounts, except insofar as the timing differences are expected to continue for the foreseeable future.

(d) FOREIGN CURRENCY

Assets and liabilities in foreign currencies are translated to sterling at the rates of exchange ruling at the end of the financial year. Exchange differences resulting from changes in foreign currency rates are written off to the profit and loss account.

(e) RESEARCH AND DEVELOPMENT EXPENDITURE

Expenditure on research and development is written off to the profit and loss account during the year in which it is incurred.

(f) OPERATING LEASES

Costs in respect of operating leases are charged on a straight line basis in arriving at the operating profit.

PHARMACIA & UPJOHN (CAMBRIDGE) LIMITED

FORMERLY

PHARMACIA BIOTECH (BIOCHROM) LIMITED

NOTES TO THE ACCOUNTS

YEAR ENDED 31ST DECEMBER 1998

1. ACCOUNTING POLICIES (CONTINUED)

(g) STOCKS AND WORK IN PROGRESS

Stocks are stated at the lower of cost and net realisable value. Cost in this context includes all attributable costs in getting each item to its present location and condition and, for finished goods and work in progress, a proportion of attributable overheads based on a normal level of activity. Net realisable value is the price at which stock can be sold in the normal course of business after allowing for the costs of realisation, and where appropriate, the costs of conversion from their existing state to a finished condition. Provision is made for obsolete, slow moving and defective stocks.

(h) PENSION COSTS

The Company operates a funded defined benefit pension scheme which is contracted out of the state scheme. The fund is valued every three years by a professionally qualified independent actuary, the rates of contribution payable being determined by the actuary. Pension costs are accounted for on the basis of charging the expected cost of providing pensions over the period during which the company benefits from the employees' services. The effects of variations from regular cost are spread over the expected average remaining service lives of members of the scheme.

2. TURNOVER

Turnover represents the invoiced value of goods and services supplied during the year, less trade discounts and trade commissions, excluding Value Added Tax.

Turnover arises from the principal activity of the Company and was derived from the following geographical areas by destination:

	1998	1997
	L	L
Europe	4,519,415	5,280,673
Asia and Australasia	831,277	978,144
The Americas	1,693,897	2,301,527
Middle East and Africa	57,187	139,600
Turnover is all UK by origin	7,101,776	8,699,944

PHARMACIA & UPJOHN (CAMBRIDGE) LIMITED

FORMERLY

PHARMACIA BIOTECH (BIOCHROM) LIMITED

NOTES TO THE ACCOUNTS

YEAR ENDED 31ST DECEMBER 1998

3. OPERATING PROFIT

	1998	1997
	L	L
Operating profit has been arrived at after charging:-		
Auditors remuneration--audit services	22,030	19,350
--non audit services	13,325	15,175
Operating lease rentals:-		
Machinery, equipment and vehicles	51,753	58,987
Premises	231,333	227,000
Depreciation	190,915	212,740

4. OTHER OPERATING INCOME

	1998	1997
	L	L
Miscellaneous income	48,808	61,019
	L48,808	L61,019

5. INTEREST RECEIVABLE

	1998	1997
	L	L
On bank current account cash balance	83,095	114,392
	L83,095	L114,392

6. TAXATION

	1998	1997
	L	L
United Kingdom corporation tax at 31%		
Current	193,000	439,000
Under provision in respect of prior years;		
Current	1,935	5,323
	L194,935	L444,323

PHARMACIA & UPJOHN (CAMBRIDGE) LIMITED

FORMERLY

PHARMACIA BIOTECH (BIOCHROM) LIMITED

NOTES TO THE ACCOUNTS

YEAR ENDED 31ST DECEMBER 1998

7. EMPLOYEES

	1998	1997
	NO.	NO.
The average number of employees, (including the executive Director) was made up as follows:		
Manufacturing, production and development	48	48
Distribution	7	8
Administration	5	5
	60	61
	L	L
Staff costs, including full time working Directors amounted to:		
Salaries and bonuses	1,308,728	1,368,189
National insurance	105,959	107,986
Pension costs	127,348	118,317
	L1,542,035	L1,594,492

8. DIRECTORS` EMOLUMENTS

	1998	1997
	L	L
Emoluments of Directors of Pharmacia & Upjohn (Cambridge) Limited		
Fees	--	--
Other emoluments--salary, bonus and benefits in kind	73,705	68,244
	73,705	68,244

Retirement benefits are accruing to one Director under a defined benefit scheme (1997:one).

9. TANGIBLE FIXED ASSETS

	COMPUTER EQUIPMENT	LEASEHOLD BUILDING IMPROVEMENTS	PLANT MACHINERY EQUIPMENT & TOOLING	TOTAL
	L	L	L	L
COST				
At 1st January 1998	428,534	227,692	1,263,370	1,919,596
Disposals during year	(45,949)	--	(12,929)	(58,878)
Additions	42,429	--	108,882	151,311
At 31st December 1998	425,014	227,692	1,359,323	2,012,029
DEPRECIATION				
At 1st January 1998	323,582	203,176	937,334	1,464,092
Disposals during year	(45,949)	--	(12,929)	(58,878)
Charge for the year	43,780	6,475	140,660	190,915
At 31st December 1998	321,413	209,651	1,065,065	1,596,129
NET BOOK VALUE				
At 31st December 1998	103,601	18,041	294,258	415,900
At 31st December 1997	104,952	24,516	326,036	455,504

10. STOCK

	1998	1997
	L	L
Components, materials and supplies	528,408	636,259
Work in progress	32,002	3,053
Finished goods	76,146	66,829
	L636,556	L706,141

The Directors do not believe that the current replacement cost of stock is materially different from its historical cost.

11. DEBTORS

	1998	1997
	L	L
Advance Corporation Tax Recoverable	307,437	306,187
Trade debtors	1,093,118	1,038,502
Amounts owed by holding company and fellow subsidiaries	4,145	2,814
Other debtors and prepayments	198,859	189,996
	L1,603,559	L1,537,499

12. CREDITORS--AMOUNTS FALLING DUE WITHIN ONE YEAR

	1998	1997
	L	L
Trade creditors	484,770	526,387
Other creditors	181,806	86,986
Other taxation and social security	29,171	33,681
Corporation tax	193,000	157,730
	888,747	L804,784

13.(A) PROVISIONS FOR LIABILITIES AND CHARGES

	1998	1997
	L	L
Pension fund liability	46,350	--

Following the net asset sale dated 26th February 1999 a pension fund liability may crystalise when the Company's pension fund transfers scheme assets to Biochrom Limited's new pension scheme in 1999.

	1998	1997
	L	L
Building lease dilapidation provision	--	75,000

The dilapidation provision was released to the Profit and Loss account in the light of the surrender without penalty of the building lease on the sale of net assets of the Company described in note 23.

13.(B) DEFERRED TAXATION

The provision for deferred taxation, and the full potential asset, are made up as follows:-

	1998		1997	
	FULL POTENTIAL (ASSET)/LIABILITY	PROVISION MADE	FULL POTENTIAL (ASSET)/LIABILITY	PROVISION MADE
	L	L	L	L
Accelerated capital allowances.....	(45,713)	--	(43,881)	--
Short term timing differences.....	(738)	--	(22,499)	--
	L(46,451)	L--	L(66,380)	L--

14. CALLED UP SHARE CAPITAL

	1998	1997
AUTHORISED		
Ordinary shares of L1 each.....	L2,000,000	L2,000,000
ALLOTTED, CALLED UP AND FULLY PAID		
Ordinary shares of L1 each.....	L2,000,000	L2,000,000

15. STATEMENT OF RESERVES

	1998	1997
	L	L
At 1st January 1998.....	846,126	2,349,827
Retained Profit/(Loss) for the year.....	420,022	(1,503,701)
At 31st December 1998.....	1,266,148	846,126

16. RECONCILIATION OF MOVEMENTS IN SHAREHOLDERS' FUNDS

	1998	1997
	L	L
Profit for the year.....	420,022	846,126
Appropriation, net dividend on ordinary shares.....	--	(2,349,827)
Net addition/(reduction) to shareholders' funds.....	420,022	(1,503,701)
Opening shareholders' funds.....	2,846,126	4,349,827
Closing shareholders' funds.....	3,266,148	2,846,126

17. CAPITAL COMMITMENTS

	1998	1997
	L	L
Future capital expenditure contracted, but not provided for:	--	--

18. CONTINGENT LIABILITIES AND FINANCIAL COMMITMENTS

	1998	1997
	L	L
Amount of performance bonds	944	944
Guarantee given to H.M. Customs & Excise in respect of import duty & VAT	120,000	120,000
	L120,944	L120,944

a) The Directors do not expect liabilities to arise from the performance bonds issued.

b) The company has entered into a composite accounting agreement with Barclays Bank PLC., along with other members of the Pharmacia & Upjohn Limited group. As a member of the Pharmacia & Upjohn Limited group cash pool, the company has a contingent liability of L10 million (1997 L10 million) in respect of overdrafts of the other members in the group cash pool.

c) At 31st December 1998, the Company had financial commitments in respect of operating leases for vehicles, equipment and premises, terminating in 1999 and thereafter. The total amount payable in the next year under these leases is as follows:-

	1998		1997	
	LAND AND BUILDINGS	OTHER	LAND AND BUILDINGS	OTHER
	L	L	L	L
Leases expiring between				
Less than one year	170,250	3,870	--	2,894
One to two years	--	2,497	227,000	4,992
Two and five years inclusive	--	42,048	--	34,356
	L170,250	L48,415	L227,000	L42,242

19. CASH FLOW STATEMENT

(a) Reconciliation of operating profit to net cash inflow from operating activities:

	1998	1997
	L	L
Operating profit	531,862	1,176,057
Depreciation charges	190,915	212,740
(Gain) on sale of tangible fixed assets	--	(215)
Decrease/(Increase) in stocks	69,585	59,566
(Increase) in debtors	(63,479)	(63,377)
Increase/(Decrease) in creditors	13,360	(28,930)
Net cash inflow from operating activities	L742,243	L1,355,841

(b) Analysis of changes in net funds and movement during the year

	1998	1997
	L	L
Balance at 1st January 1998	1,026,766	3,189,230
Net cash inflow/(outflow)	518,464	(2,162,464)
Balance at 31st December 1998	L1,545,230	L1,026,766

(c) Analysis of the balances of cash shown in the balance sheet

	1998	1997	CHANGE IN YEAR
	L	L	L
Cash at bank and in hand	1,545,230	1,026,766	518,464

20. PENSION OBLIGATIONS

The Company participates in a pension fund operated by Pharmacia Biotech UK, a branch office of Pharmacia Biotech Europe GmbH (previously Pharmacia Limited) providing benefits based on final pensionable pay. The assets of the fund are held separately from those of the Company being invested with investment managers in a managed fund.

20. PENSION OBLIGATIONS (CONTINUED)

The total pension cost for the company is set out in note 7. The pension cost is assessed in accordance with the advice of an independent qualified actuary using the projected unit method. The most recent actuarial valuation adopted by the Trustees of the Pharmacia Limited Staff Superannuation Fund was as at 1 January 1997. The assumptions which had the most significant effect on the results of the valuation were those relating to:

a) the future rate of investment return on the fund;

b) the future rate at which members' salaries would increase;

c) the rate of withdrawal from service.

It was assumed that the long term rate of investment return would be at an average of 9% per annum and the rate of future salary increases would be at 7.5% per annum. The rate of withdrawal from service was selected at a rate slightly less than the rate experienced over the inter-valuation period.

The most recent actuarial valuation adopted by the Trustees showed that the market value of the fund's assets was L5,564,000 and that the actuarial value of those assets represented 112% of the benefits that had accrued to members, after allowing for expected future increases in basic salary.

The existing pension fund was formed in 1986 by the amalgamation of the Pharmacia Biotech Limited and Pharmacia LKB Biochrom Limited schemes. Following the net asset sale on 26 February 1999 (note 23), all Pharmacia Biotech active members (staff formerly employed by Pharmacia Biotech Limited) will transfer into the Nycomed Amersham Scheme. The remaining "Biochrom" active members will have the choice to transfer into the new Biochrom Limited pension scheme. All current and deferred members will remain in the Pharmacia Biotech UK Pension Fund which will be administered by Pharmacia & Upjohn at Milton Keynes.

21. RELATED PARTY TRANSACTIONS

As a wholly owned subsidiary, whose results are included in the consolidated financial statements of Pharmacia & Upjohn, Inc. (see note 22), the company is exempt from the requirement to disclose details of transactions with other group companies.

The Director regards Amersham Pharmacia Biotech AB ("APB") as a related party by virtue of the fact that the company's ultimate parent undertaking Pharmacia & Upjohn Inc. holds a 45% interest in APB and that there are certain common directorships. Sales to APB group companies amounted to L6,608,485 and the company was owed L1,010,761 as at 31 December 1998 in relation to trading balances.

22. ULTIMATE AND IMMEDIATE PARENT UNDERTAKING

The directors regard Pharmacia & Upjohn, Inc, a company incorporated in the USA, as the ultimate parent and controlling undertaking. Copies of the ultimate parent's consolidated financial statements may be obtained from:

Pharmacia & Upjohn, Inc
7000 Portage Road, Kalamazoo
Michigan 49001, USA

According to the register kept by the company, Pharmacia & Upjohn Limited, a company registered in England and Wales, has a 100% interest in the equity capital of the company at 31 December 1998.

23. POST BALANCE SHEET EVENTS

On the 26th February 1999, the Company sold the majority of its net assets to Biochrom Limited for a consideration of US Dollars 6,362,574. Following this, the Company will cease to trade.

24. SUMMARY OF DIFFERENCES BETWEEN UK AND US GENERALLY ACCEPTED ACCOUNTING PRINCIPLES ("GAAP")

The company has prepared financial statements in accordance with UK GAAP. There are no reconciling differences between US and UK GAAP related to the equity shareholders' funds as of 31 December 1997 and 1998 and the net income for the years ended 31 December 1997 and 1998. The financial statements reflect all costs of doing business including costs incurred by other group companies on behalf of the Company. As of 31 December 1997 and 1998 the following other differences exist:

DEFERRED TAXATION

Under UK GAAP, provision for deferred tax is only required to the extent that it is probable that a taxation liability or asset will crystallise, in the foreseeable future, as a result of timing differences between taxable profits and accounting profit, with provision made at the known tax rate.

Under US GAAP, full provision for deferred tax is required to the extent that accounting profit differs from taxable profit due to temporary differences. Provision is made at the tax rate in effect at the time the difference is likely to reverse. A valuation adjustment is made against deferred tax assets when it is more likely than not that a deferred tax asset will not be realised. As such, provision for the taxable losses carried forward of L46,451 would be provided with a valuation allowance for the full amount, resulting in no net impact on the profit and loss account or shareholders' equity, as of 31 December 1998. Provision for the taxable losses carried forward of L66,380 would be provided with a valuation allowance for the full amount, resulting in no net impact on the profit and loss account or shareholders' equity, as of 31 December 1997.

24. SUMMARY OF DIFFERENCES BETWEEN UK AND US GENERALLY ACCEPTED ACCOUNTING PRINCIPLES ("GAAP") (CONTINUED)

CASH FLOW STATEMENTS

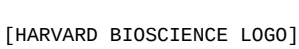
The cash flow statement is prepared in accordance with United Kingdom Financial Reporting Standard 1 "FRS 1 (Revised 1996)", whose objective and principles are similar to those set out in SFAS No.95, "Statement of Cash Flows". The principal differences between the standards relate to classification. Under FRS 1 (Revised 1996), the company presents its cash flows for (a) operating activities, (b) returns on investments and servicing of finance, (c) taxation, (d) capital expenditure and financial investment, (e) equity dividends paid, (f) management of liquid resources and (g) financing. SFAS No.95 requires only three categories of cash flow activity being (a) operating, (b) investing and (c) financing.

Cash flows from taxation and returns on investments and servicing of finance under FRS 1 (Revised 1996) would be included as operating activities under SFAS No.95, capital expenditure and financial investment would be included as investing activities, and equity dividends paid would be included as a financing activity under SFAS No.95. Under FRS 1 (Revised 1996) cash comprises cash in hand and deposits repayable on demand, less overdrafts repayable on demand, and liquid resources comprise current asset investments held as readily disposable stores of value. Under SFAS No.95 cash equivalents, comprising short-term highly liquid investments, generally with original maturities of three months or less, are grouped together with cash. Cash equivalents exclude overdrafts. There are no differences between cash as stated under UK GAAP and cash and cash equivalents as stated under US GAAP at 31 December 1997 and 1998.

Set out below, for illustrative purposes, is a summary of cash flows under US GAAP.

	YEAR ENDED 31 DECEMBER	
	1998	1997
	L'000	L'000
Net cash provided by operating activities	663,092	310,979
Net cash used in investing activities	(144,628)	(123,616)
Net cash used in financing activities	--	(2,349,827)
Net increase/(decrease) in cash and cash equivalents	518,464	(2,612,464)
Cash and cash equivalents at beginning of period	1,026,766	3,639,230
Cash and cash equivalents at end of period	1,545,230	1,026,766
Supplement cash flow information:		
Cash paid for interest	--	--
Cash paid for income taxes	(160,915)	(1,163,780)

PROSPECTUS ,2000



6,422,450 SHARES
COMMON STOCK

THOMAS WEISEL PARTNERS LLC
DAIN RAUSCHER WESSELS
ING BARINGS

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Neither we nor any of the underwriters have authorized anyone to provide information different from that contained in this prospectus. When you make a decision about whether to invest in our common stock, you should not rely upon any information other than the information in this prospectus. Neither the delivery of this prospectus nor the sale of our common stock means that information contained in this prospectus is correct after the date of this prospectus. This prospectus is not an offer to sell or solicitation of an offer to buy these shares of common stock in any circumstances under which the offer or solicitation is unlawful.

Until , 2000 (25 days after commencement of this offering), all dealers that buy, sell or trade these shares of common stock, whether or not participating in this offering, may be required to deliver a prospectus. This is an addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 13. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

The following table sets forth the estimated expenses payable by us in connection with the offering (excluding underwriting discounts and commissions):

NATURE OF EXPENSE	AMOUNT
SEC Registration Fee	$ 25,260
NASD Filing Fee	10,070
Nasdaq National Market Listing Fee	95,000
Accounting Fees and Expenses	550,000
Legal Fees and Expenses	600,000
Printing Expenses	200,000
Blue Sky Qualification Fees and Expenses	5,000
Transfer Agent's Fee	5,000
Miscellaneous	9,670
TOTAL	$1,500,000

The amounts set forth above, except for the Securities and Exchange Commission, National Association of Securities Dealers, Inc. and Nasdaq National Market fees, are in each case estimated.

ITEM 14. INDEMNIFICATION OF DIRECTORS AND OFFICERS

In accordance with Section 145 of the Delaware General Corporation Law, Article VII of our certificate of incorporation provides that none of our directors will be personally liable to us or our stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (1) for any breach of the director's duty of loyalty to us or our stockholders, (2) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (3) in respect of unlawful dividend payments or stock redemptions or repurchases, or (4) for any transaction from which the director derived an improper personal benefit. In addition, our certificate of incorporation provides that if the Delaware General Corporation Law is amended to authorize the further elimination or limitation of the liability of directors, then the liability of a director of the corporation shall be eliminated or limited to the fullest extent permitted by the Delaware General Corporation Law, as so amended.

Article V of our by-laws provides for our indemnification of our officers and certain non-officer employees under certain circumstances against expenses, including attorneys' fees, judgments, fines and amounts paid in settlement, reasonably incurred in connection with the defense or settlement of any threatened, pending or completed legal proceeding in which any such person is involved by reason of the fact that such person is or was an officer or employee of the registrant if such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to our best interests, and, with respect to criminal actions or proceedings, if such person had no reasonable cause to believe his or her conduct was unlawful.

Prior to the offering, we will have entered into indemnification agreements with each of our directors. The form of indemnification agreement provides that we will indemnify our directors for expenses incurred because of their status as a director to the fullest extent permitted by Delaware law, our certificate of incorporation and our by-laws.

ITEM 15. RECENT SALES OF UNREGISTERED SECURITIES

Set forth in chronological order below is information regarding the number of shares of capital stock issued by us since October 15, 1997. Also included is the consideration, if any, received by us for such shares. There was no public offering in any such transaction and we believe that each transaction was exempt from the registration requirements of the Securities Act of 1933 by reason of Section 4(2) thereof, based on the private nature of the transactions and the financial sophistication of the purchasers, all of whom had access to complete information concerning us and acquired the securities for investment and not with a view to the distribution thereof. In addition, we believe that the transactions described below with respect to issuances and option grants to our employees and directors were exempt from the registration requirements of said Act by reason of Section 4(2) of said Act or Rule 701 promulgated thereunder.

(a) ISSUANCE OF CAPITAL STOCK

(i) In 1999, we issued an aggregate of 48,500 shares of our series B convertible preferred stock to Ascent Venture Partners, L.P. (formerly known as Pioneer Capital Corp.) and Citizens Capital, Inc. for an aggregate purchase price of $1,000,000.

(ii) In March 2000, we issued 1,091,716 shares of our common stock upon the exercise of previously granted stock options at an aggregate exercise price of $1,792.14.

(iii) In September 2000, we issued 2,376,236 shares of our common stock upon the exercise of previously granted stock options at an aggregate exercise price of $1,549,155.40.

(b) GRANTS OF STOCK OPTIONS

(i) As of October 15, 2000, options to purchase 599,096 shares of common stock were outstanding under our 1996 Stock Option and Grant Plan. None of these options is exercisable within 60 days of such date. All such options were granted between March 1996 and October 2000 to our officers, directors, employees and consultants.

ITEM 16. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(A) EXHIBITS. The following is a complete list of exhibits filed or incorporated by reference as part of this Registration Statement.

1.1	Form of Underwriting Agreement.
**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. (Excluding schedules and exhibits which Registrant agrees to furnish supplementally to the Commission upon request.)
**2.2	Asset Purchase Agreement dated July 14, 2000 by and between Harvard Apparatus, Inc., AmiKa Corporation and Ashok Shukla. (Excluding schedules and exhibits which Registrant agrees to furnish supplementally to the Commission upon request.)
**3.1	Form of Amended and Restated Certificate of Incorporation of the Registrant.
**3.2	Form of Second Amended and Restated Certificate of Incorporation of the Registrant.
**3.3	Form of Amended and Restated By-laws of the Registrant.
**4.1	Specimen certificate for shares of Common Stock, $0.01 par value, of the Registrant.
**4.2	Amended and Restated Securityholders' Agreement dated as of March 2, 1999 by and among Harvard Apparatus, Inc., Pioneer Ventures Limited Partnership, Pioneer Ventures Limited Partnership II, Pioneer Capital Corp., First New England Capital, L.P. and Citizens Capital, Inc. and Chane Graziano and David Green.
**5.1	Opinion of Goodwin, Procter & Hoar LLP as to the legality of the securities offered.

**10.1	Harvard Apparatus, Inc. 1996 Stock Option and Grant Plan.
**10.2	Harvard Bioscience, Inc. 2000 Stock Option and Incentive Plan.
**10.3	Harvard Bioscience, Inc. Employee Stock Purchase Plan.
+10.4	Distribution Agreement dated March 2, 1999 by and between Biochrom Limited and Amersham Pharmacia Biotech AB.
**10.5	Form of Employment Agreement between Harvard Bioscience and Chane Graziano.
**10.6	Form of Employment Agreement between Harvard Bioscience and David Green.
**10.7	Form of Employment Agreement between Harvard Bioscience and James L. Warren.
**10.8	Form of Director Indemnification Agreement.
**10.9	Lease Agreement dated December 16, 1996 between Seven October Hill LLC and Harvard Apparatus, Inc.
**10.10	First Amendment to Lease dated November 13, 1998 to Lease Agreement dated December 16, 1996 between Seven October Hill LLC and Harvard Apparatus, Inc.
**10.11	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.
**10.12	Lease Agreement for Commercial Premises dated November 26, 1999 made between Mr. Heinz Dehnert, Grunstrabe 1, 79232 March-Hugstetten, Lessor and the Company of Harvard Apparatus GmbH, Lessee.
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**10.14	Amendment and Waiver dated December 31, 1999 to Amended and Restated Loan and Security Agreement between Brown Brothers Harriman & Co., Fleet National Bank (formerly known as BankBoston N.A.) and Harvard Apparatus, Inc.
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**10.16	Third Amendment dated October 25, 2000 to Amended and Restated Loan and Security Agreement between Brown Brothers Harriman & Co., and Fleet National Bank (formerly known as BankBoston N.A.) and Harvard Apparatus, Inc.
**21.1	Subsidiaries of the Registrant.
**23.1	Consent of Goodwin, Procter & Hoar LLP (included in Exhibit 5.1 hereto).
23.2	Consent of KPMG LLP.
23.3	Consent of PricewaterhouseCoopers.
**24.1	Powers of Attorney for Messrs. Graziano, Warren, Green, Dick and Klaffky.
**24.2	Powers of Attorney for Messrs. Dishman, Kennedy and Lewis.
**27.1	Financial Data Schedule.
**99.1	Consent of Robert Dishman to be named as a person to be appointed a director of Registrant in this Registration Statement.
**99.2	Consent of Earl R. Lewis to be named as a person to be appointed a director of Registrant in this Registration Statement.
**99.3	Consent of John F. Kennedy to be named as a person to be appointed a director of Registrant in this Registration Statement.

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** Previously filed.

+ Confidential treatment requested as to this previously filed exhibit.

(B) FINANCIAL STATEMENT SCHEDULES

All schedules have been omitted because they are not required or because the required information is given in the consolidated financial statements or notes to those statements.

ITEM 17. UNDERTAKINGS

The undersigned registrant hereby undertakes to provide to the underwriters at the closing specified in the Underwriting Agreement certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

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.

The undersigned registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus 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.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Boston, on December 5, 2000.

HARVARD BIOSCIENCE, INC.

By: /s/ JAMES WARREN
James Warren
CHIEF FINANCIAL OFFICER

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

SIGNATURE	TITLE	DATE
*	Chief Executive Officer and Director (Principal Executive Officer)	December 5, 2000
Chane Graziano		
/s/ JAMES WARREN	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	December 5, 2000
James Warren		
*	President and Director	December 5, 2000
David Green		
*	Director	December 5, 2000
Christopher W. Dick		
*	Director	December 5, 2000
Richard C. Klaffky, Jr.		
*	Director	December 5, 2000
Robert Dishman		
*	Director	December 5, 2000
John F. Kennedy		
*	Director	December 5, 2000
Earl R. Lewis		

*By: /s/ JAMES WARREN
James Warren
Attorney-in-fact

EXHIBIT INDEX

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- ------------------------

** Previously filed.

+ Confidential treatment requested as to this previously filed exhibit.

Exhibit 1.1

6,422,450 SHARES

HARVARD BIOSCIENCE, INC.

COMMON STOCK, $.01 PAR VALUE

UNDERWRITING AGREEMENT

DATED: DECEMBER _____, 2000

December _____, 2000

Thomas Weisel Partners LLC
Dain Rauscher Incorporated
ING Barings LLC
As Representatives of the several Underwriters
c/o Thomas Weisel Partners LLC
One Montgomery Street, Suite 3700
San Francisco, California 94104

Ladies and Gentlemen:

INTRODUCTION. Harvard Bioscience, Inc., a Delaware corporation (the "COMPANY"), proposes, subject to the terms and conditions contained herein, to issue and sell to the several underwriters named in SCHEDULE A hereto (the "UNDERWRITERS"), and the stockholder of the Company (the "SELLING STOCKHOLDER") named in SCHEDULE B hereto severally propose to sell to the several Underwriters, an aggregate of 6,422,450 shares of the Common Stock, par value $.01 per share, of the Company (the "FIRM SHARES"), of which 6,250,000 shares are to be issued and sold by the Company and 172,450 shares are to be sold by the Selling Stockholder, as set forth opposite such Selling Stockholder's name in SCHEDULE B hereto.

The Company also proposes to issue and sell to the several Underwriters not more than an additional 937,500 shares of its Common Stock, par value $.01 per share (the "ADDITIONAL SHARES"), if and to the extent that you shall have determined to exercise, on behalf of the Underwriters, the right to purchase such shares of common stock granted to the Underwriters in Section 3 hereof. The Firm Shares and the Additional Shares are hereinafter collectively referred to as the "SHARES". The shares of Common Stock, par value $.01 per share, of the Company to be outstanding after giving effect to the sales contemplated hereby are hereinafter referred to as the "COMMON STOCK". The Company and the Selling Stockholder are hereinafter sometimes collectively referred to as the "SELLERS". Thomas Weisel Partners LLC, Dain Rauscher Incorporated and ING Barings LLC have agreed to act as representatives of the several Underwriters (in such capacity, the "REPRESENTATIVES") in connection with the offering and sale of the Shares.

The Company has filed with the Securities and Exchange Commission (the "COMMISSION") a registration statement on Form S-1 (file no. 333-45996), including a prospectus, relating to the Shares. The registration statement as amended at the time it becomes effective, including the information (if any) deemed to be part of the registration statement at the time of effectiveness pursuant to Rule 430A under the Securities Act of 1933, as amended (the "SECURITIES ACT"), is hereinafter referred to as the "REGISTRATION STATEMENT". The prospectus (as described in Rule 434(a)(i) under the Securities Act) in the form first used to confirm sales of Shares is hereinafter referred to as the "DISTRIBUTED PROSPECTUS"; the prospectus included in the Registration Statement at the time of its effectiveness (including the information, if any, deemed to be a part of the Registration Statement at the time of effectiveness pursuant to Rule 430A under the Securities Act) is hereinafter referred to as the "FILED PROSPECTUS"; and the Distributed Prospectus and the Filed Prospectus are hereinafter referred to collectively as the "PROSPECTUS". If the Company has filed a registration statement to register additional shares of Common Stock pursuant to Rule 462(b) under the Securities Act (the "RULE 462

REGISTRATION STATEMENT"), then any reference herein to the term "REGISTRATION STATEMENT" shall be deemed to include such Rule 462 Registration Statement. All references in this Agreement to the Registration Statement, the Rule 462 Registration Statement, a preliminary prospectus, the Prospectus, or any amendments or supplements to any of the foregoing, shall include any copy thereof filed with the Commission pursuant to its Electronic Data Gathering, Analysis and Retrieval System ("EDGAR").

As part of the offering contemplated by this Agreement, Thomas Weisel Partners has agreed to reserve out of the Shares set forth opposite its name on SCHEDULE A to this Agreement, up to 300,000 shares, for sale to the Company's employees, officers, and directors and other parties associated with the Company (collectively, "PARTICIPANTS"), as set forth in the Prospectus under the heading "Underwriting" (the "DIRECTED SHARE PROGRAM"). The Shares to be sold by Thomas Weisel Partners pursuant to the Directed Share Program (the "DIRECTED SHARES") will be sold by Thomas Weisel Partners pursuant to this Agreement at the public offering price. Any Directed Shares not orally confirmed for purchase by any Participants by the end of the first business day after the date on which this Agreement is executed will be offered to the public by Thomas Weisel Partners as set forth in the Prospectus.

1. REPRESENTATIONS AND WARRANTIES OF THE COMPANY. The Company hereby represents and warrants to, and agrees with, each of the Underwriters that:

1.1. EFFECTIVE REGISTRATION STATEMENT. To the Company's knowledge, based solely on oral advice provided by the Commission on the date hereof, the Registration Statement has become effective; the Company has not received notice of any stop order suspending the effectiveness of the Registration Statement, and the Company has not received notice of any proceedings for such purpose pending before or, threatened by, the Commission.

1.2. CONTENTS OF REGISTRATION STATEMENT. (i) The Registration Statement did not contain and, as amended or supplemented, if applicable, will not, as of the applicable effective date of the Registration Statement and any amendment thereto, 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 therein not misleading, (ii) the Registration Statement and the Prospectus conform and, as amended or supplemented, if applicable, will conform in all material respects to the requirements of the Securities Act and the applicable rules and regulations of the Commission thereunder, and (iii) the Prospectus does not contain and, as amended or supplemented, if applicable, will not, as of the applicable date of the Prospectus and any amendment or supplement thereto, contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, except that the representations and warranties set forth in this paragraph do not apply to statements or omissions in the Registration Statement or the Prospectus based upon information furnished to the Company in writing by, or on behalf of, any Underwriter through you expressly for use therein.

1.3. DUE INCORPORATION. The Company has been duly incorporated, exists as a corporation in good standing under the laws of the jurisdiction of its incorporation, has the corporate power and authority to own its property and to conduct its business as described in the Prospectus and is duly qualified to transact business and is in good standing in each jurisdiction in which the conduct of its business or its ownership or leasing of property requires such qualification, except where the failure to be so qualified or be in good standing would not have a material adverse effect on the Company and its subsidiaries, taken as a whole.

1.4. SUBSIDIARIES. Each subsidiary of the Company has been duly incorporated, exists as a corporation in good standing under the laws of the jurisdiction of its incorporation, has the corporate power

and authority to own its property and to conduct its business as described in the Prospectus and is duly qualified to transact business and is in good standing in each jurisdiction in which the conduct of its business or its ownership or leasing of property requires such qualification, except where the failure to be so qualified or be in good standing would not have a material adverse effect on the Company and its subsidiaries, taken as a whole. All of the issued shares of capital stock of each subsidiary of the Company have been duly authorized and validly issued, are fully paid and non-assessable and are owned by the Company, directly or through a wholly-owned subsidiary of the Company, free and clear of all liens, encumbrances, equities or claims, except as disclosed in the Prospectus and any liens, encumbrances, equities or claims placed on the Company's assets generally in the ordinary course of business.

1.5. UNDERWRITING AGREEMENT. This Agreement has been duly authorized, executed and delivered by the Company, and is a valid and binding agreement of the Company, enforceable in accordance with its terms, except as rights to indemnification hereunder may be limited by applicable law, including federal and state securities laws and pubic policy considerations and except as the enforcement hereof may be limited by bankruptcy, insolvency, reorganization, moratorium or other similar laws relating to or affecting the rights and remedies of creditors or by general equitable principles.

1.6. DESCRIPTION OF CAPITAL STOCK. The authorized capital stock of the Company conforms in all material respects as to legal matters to the description thereof contained in the Prospectus.

1.7. AUTHORIZED STOCK. The shares of Common Stock (including the Shares to be sold by the Selling Stockholder) outstanding prior to the issuance of the Shares to be sold by the Company have been duly authorized and are validly issued, fully paid and non-assessable.

1.8. VALIDLY ISSUED SHARES. The Shares to be sold by the Company have been duly authorized and, when issued and delivered in accordance with the terms of this Agreement, will be validly issued, fully paid and non-assessable, and the issuance of such Shares will not be subject to any preemptive or similar rights.

1.9. NO CONFLICT. The execution and delivery by the Company of, and the performance by the Company of its obligations under, this Agreement will not contravene any provision of applicable law or the certificate of incorporation or by-laws of the Company or any agreement or other instrument binding upon the Company or any of its subsidiaries that is material to the Company and its subsidiaries, taken as a whole, or any judgment, order or decree of any governmental body, agency or court having jurisdiction over the Company or any subsidiary, and no consent, approval, authorization or order of, or qualification with, any governmental body or agency is required for the performance by the Company of its obligations under this Agreement, except such as have been obtained under the Securities Act or the rules and regulations thereunder and such as may be required by the securities or Blue Sky laws of the various states or by the by-laws and rules of the National Association of Securities Dealers, Inc. in connection with the offer and sale of the Shares.

1.10. NO MATERIAL ADVERSE CHANGE. There has not occurred any material adverse change in the financial condition, earnings, business or operations of the Company and its subsidiaries, taken as a whole, from that set forth in the Prospectus (exclusive of any amendments or supplements thereto subsequent to the date of this Agreement).

1.11. LEGAL PROCEEDINGS; EXHIBITS. There are no legal or governmental proceedings pending or, to the best knowledge of the Company, threatened, to which the Company or any of its subsidiaries is a party or to which any of the properties of the Company or any of its subsidiaries is subject

that are required to be described in the Registration Statement or the Prospectus and are not so described or any statutes, regulations, contracts or other documents that are required to be described in the Registration Statement or the Prospectus or to be filed as exhibits to the Registration Statement that are not described or filed as required.

1.12. COMPLIANCE WITH SECURITIES ACT. Each preliminary prospectus filed as part of the registration statement as originally filed or as part of any amendment thereto, or filed pursuant to Rule 424 under the Securities Act, conformed when so filed in all material respects with the Securities Act and the applicable rules and regulations of the Commission thereunder, other than with respect to the omission of pricing and share information in the prospectus contained in the initially filed Registration Statement.

1.13. NOT AN INVESTMENT COMPANY. The Company is not and, after giving effect to the offering and sale of the Shares and the application of the proceeds thereof as described in the Prospectus, will not be an "investment company" as such term is defined in the Investment Company Act of 1940, as amended.

1.14. COMPLIANCE WITH ENVIRONMENTAL LAWS. The Company and its subsidiaries (i) are in compliance with any and all applicable foreign, federal, state and local laws and regulations relating to the protection of human health and safety, the environment or hazardous or toxic substances or wastes, pollutants or contaminants ("ENVIRONMENTAL LAWS"), (ii) have received all permits, licenses or other approvals required of them under applicable Environmental Laws to conduct their respective businesses and (iii) are in compliance with all terms and conditions of any such permit, license or approval, except where such noncompliance with Environmental Laws, failure to receive required permits, licenses or other approvals or failure to comply with the terms and conditions of such permits, licenses or approvals would not, individually or in the aggregate, have a material adverse effect on the Company and its subsidiaries, taken as a whole.

1.15. INTENTIONALLY OMITTED

1.16. NO REGISTRATION RIGHTS. There are no contracts, agreements or understandings between the Company and any person granting such person the right to require the Company to file a registration statement under the Securities Act with respect to any securities of the Company or to require the Company to include such securities with the Shares registered pursuant to the Registration Statement other than as described in the Registration Statement and as have been waived in writing in connection with the offering contemplated hereby (except with respect to the Shares to be sold by the Selling Stockholder pursuant to this Agreement).

1.17. CUBAN BUSINESS STATUTE. The Company has complied with all provisions of Section 517.075, Florida Statutes relating to doing business with the Government of Cuba or with any person or affiliate located in Cuba.

1.18. ABSENCE OF MATERIAL CHARGES. Subsequent to the respective dates as of which information is given in the Registration Statement and the Prospectus, (i) the Company and its subsidiaries have not incurred any material liability or obligation, direct or contingent, nor entered into any material transaction except such liabilities or obligations incurred, or transactions entered into, in the ordinary course of business; (ii) the Company has not purchased any of its outstanding capital stock, nor declared, paid or otherwise made any dividend or distribution of any kind on its capital stock other than ordinary and customary dividends; and (iii) there has not been any material change in the capital stock, short-term debt or long-term debt of the Company and its subsidiaries, except in each case as described in the Registration Statement and the Prospectus.

1.19. TITLE TO PROPERTIES. The Company and its subsidiaries have good and marketable title to all real property and valid title to all personal property described in the Prospectus as owned by them which is material to the business of the Company and its subsidiaries, in each case free and clear of all liens, encumbrances and defects except such as are described in the Prospectus or such as do not materially affect the value of such property and do not interfere with the use made and proposed to be made of such property by the Company and its subsidiaries; and any real property and buildings described in the Prospectus as held under lease by the Company and its subsidiaries are held by them under valid and subsisting leases enforceable against the Company and, to the knowledge of the Company, the other parties thereto, with such exceptions as are described in the Registration Statement or Propsectus or are not material and do not interfere with the use made and proposed to be made of such property and buildings by the Company and its subsidiaries.

1.20. INTELLECTUAL PROPERTY RIGHTS. Except as disclosed in the Registration Statement and the Prospectus, the Company and its subsidiaries own or possess, or can acquire on reasonable terms, all material patents, patent rights, licenses, inventions, copyrights, know-how (including trade secrets and other unpatented and/or unpatentable proprietary or confidential information, systems or procedures), trademarks, service marks and trade names necessary to conduct the business as now conducted by them, and neither the Company nor any of its subsidiaries has received any notice of infringement of or conflict with asserted rights of others with respect to any of the foregoing which, individually or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would have a material adverse affect on the Company and its subsidiaries, taken as a whole.

1.21. NO LABOR DISPUTES. No labor dispute with the employees of the Company or any of its subsidiaries exists or, to the knowledge of the Company, is imminent that would have a material adverse effect on the Company and its subsidiaries, taken as a whole; and the Company is not aware of any existing, threatened or imminent labor disturbance by the employees of any of its principal suppliers, manufacturers or contractors that would be reasonably likely to have a material adverse effect on the Company and its subsidiaries, taken as a whole.

1.22. INSURANCE. The Company and its subsidiaries are insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as are customary in the businesses in which they are engaged; and neither the Company nor any of its subsidiaries has any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business at a cost that would not have a material adverse effect on the Company and its subsidiaries, taken as a whole.

1.23. GOVERNMENTAL PERMITS. The Company and its subsidiaries possess all certificates, authorizations and permits necessary to conduct their respective businesses as presently conducted, and neither the Company nor any of its subsidiaries has received any notice of proceedings relating to the revocation or modification of any such certificate, authorization or permit which, individually or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would have a material adverse effect on the Company and its subsidiaries, taken as a whole.

1.24. ACCOUNTING CONTROLS. The Company and each of its subsidiaries maintains a system of internal accounting controls sufficient to provide reasonable assurance that (i) transactions are executed in accordance with management's general or specific authorizations; (ii) transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles and to maintain asset accountability; (iii) access to assets is permitted only in accordance with management's

general or specific authorization; and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences.

1.25. DIRECTED SHARE PROGRAM. The Company represents and warrants to Thomas Weisel Partners that, to the knowledge of the Company (i) the Registration Statement, the Prospectus and any preliminary prospectus comply, and any further amendments or supplements thereto will comply, with any applicable laws or regulations of foreign jurisdictions in which the Prospectus or any preliminary prospectus, as amended or supplemented, if applicable, are distributed in connection with the Directed Share Program and (ii) no authorization, approval, consent, license, order, registration or qualification of or with any government, governmental instrumentality or court, other than such as have been obtained, is necessary under the securities laws and regulations of foreign jurisdictions in which the Directed Shares are offered outside the United States.

1.26. COMPLIANCE WITH LAWS. To the Company's knowledge, the Company and each of its subsidiaries is conducting its business in compliance with the Fair Labor Standards Act, the rules and regulations of the federal Food and Drug Administration, and all applicable federal, state and local laws, rules and regulations of the jurisdictions in which it is conducting business, including, without limitation, all applicable local, state and federal laws and regulations governing zoning and land use, except where the failure to be so in compliance would not have a material adverse effect on the Company and its subsidiaries, taken as a whole.

2. REPRESENTATIONS AND WARRANTIES OF THE SELLING STOCKHOLDER. The Selling Stockholder represents and warrants to, and agrees with, each of the Underwriters that:

2.1. DUE AUTHORIZATION. This Agreement has been duly authorized, executed and delivered by or on behalf of such Selling Stockholder and constitutes a valid and binding obligation of such Selling Stockholder, enforceable against such Selling Stockholder in accordance with its terms, except as rights to indemnification hereunder may be limited by applicable federal or state securities laws and public policy considerations and except as the enforcement hereof may be limited by bankruptcy, insolvency, reorganization, moratorium or other similar laws relating to or affecting the rights and remedies of creditors or by general equitable principles.

2.2. SELLING STOCKHOLDER DOCUMENTS. The Custody Agreement and the Power of Attorney have each been duly authorized, executed and delivered by such Selling Stockholder and each such document constitutes a valid and binding obligation of such Selling Stockholder enforceable against such Selling Stockholder in accordance with its respective terms, except as rights to indemnification thereunder may be limited by applicable federal or state securities laws and public policy considerations and except as the enforcement thereof may be limited by bankruptcy, insolvency, reorganization, moratorium or other similar laws relating to or affecting the rights and remedies of creditors or by general equitable principles.

2.3. NO CONFLICT. The execution and delivery by such Selling Stockholder of, and the performance by such Selling Stockholder of its obligations under, this Agreement, the Custody Agreement signed by such Selling Stockholder and Harvard Bioscience, Inc., as Custodian, relating to the deposit of the Shares to be sold by such Selling Stockholder (the "CUSTODY AGREEMENT") and the Power of Attorney appointing certain individuals as such Selling Stockholder's attorneys-in-fact to the extent set forth therein, relating to the transactions contemplated hereby and by the Registration Statement (the "POWER OF ATTORNEY") will not contravene any provision of applicable law, or the certificate of incorporation or by-laws of such Selling Stockholder (if such Selling Stockholder is a corporation), or any material agreement or other instrument binding upon such Selling Stockholder or any judgment, order or decree of any governmental

body, agency or court having jurisdiction over such Selling Stockholder, and no consent, approval, authorization or order of, or qualification with, any governmental body or agency is required for the performance by such Selling Stockholder of its obligations under this Agreement or the Custody Agreement or Power of Attorney of such Selling Stockholder, except such as have been obtained under the Securities Act or the rules and regulations thereunder and such as may be required by the securities or Blue Sky laws of the various states or by the by-laws and rules of the National Association of Securities Dealers, Inc. in connection with the offer and sale of the Shares.

2.4. INTENTIONALLY OMITTED

2.5. GOOD TITLE TO SHARES. Such Selling Stockholder has, and on each Closing Date will have, valid title to the Shares to be sold by such Selling Stockholder and full right and power, and all authorization and approval necessary to enter into this Agreement, the Custody Agreement and the Power of Attorney and to sell, transfer and deliver the Shares to be sold by such Selling Stockholder.

2.6. DELIVERY OF COMMON SHARES. Delivery of the Shares to be sold by such Selling Stockholder pursuant to this Agreement will pass title to such Shares free and clear of any security interests, claims, liens and other encumbrances, except those created by this Agreement or the Custody Agreement.

2.7. NO REGISTRATION RIGHTS. Such Selling Stockholder does not have any registration or other similar rights to have any equity or debt securities registered for sale by the Company under the Registration Statement or included in the offering contemplated by this Agreement, other than as described in the Registration Statement and as have been waived in writing in connection with the offering contemplated hereby.

2.8. NO PRICE STABILIZATION OR MANIPULATION. Such Selling Stockholder has not taken and will not take, directly or indirectly, any action designed to or that might be reasonably expected to cause or result in stabilization or manipulation of the price of the Common Stock to facilitate the sale or resale of the Shares.

2.9. DISCLOSURE BY SELLING STOCKHOLDER IN REGISTRATION STATEMENT. Such parts of the Registration Statement comprised of the table and the notes thereto under the caption "Principal and Selling Stockholder" in the form supplied to the Selling Stockholder which specifically relate to the Selling Stockholder do 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 therein not misleading.

3. PURCHASE AND SALE AGREEMENTS.

3.1. FIRM SHARES. Subject to the terms and conditions of this Agreement, each Seller, severally and not jointly, hereby agrees to sell to the several Underwriters, and each Underwriter, upon the basis of the representations and warranties herein contained, agrees, severally and not jointly, to purchase from such Seller at $_____ a share (the "PURCHASE PRICE") the number of Firm Shares (subject to such adjustments to eliminate fractional shares as you may determine) that bears the same proportion to the number of Firm Shares to be sold by such Seller as the number of Firm Shares set forth in SCHEDULE A hereto opposite the name of such Underwriter bears to the total number of Firm Shares.

3.2. ADDITIONAL SHARES. On the basis of the representations and warranties contained in this Agreement, and subject to its terms and conditions, the Company agrees to sell to the Underwriters the Additional Shares, and the Underwriters shall have a one-time right to purchase, severally and not jointly, up

to 937,500 Additional Shares at the Purchase Price per share. If you, on behalf of the Underwriters, elect to exercise such option, you shall so notify the Company in writing not later than thirty (30) days after the date of this Agreement, which notice shall specify the number of Additional Shares to be purchased by the Underwriters and the date on which such shares are to be purchased. Such date may be the same as the Closing Date (as defined below) but not earlier than the Closing Date or, if delivered subsequent to the Closing Date, three business days after delivery of such notice of the Company, nor later than ten (10) business days after the date of such notice. Additional Shares may be purchased as provided in Section 4 hereof solely for the purpose of covering over-allotments made in connection with the offering of the Firm Shares. If any Additional Shares are to be purchased, each Underwriter agrees, severally and not jointly, to purchase the number of Additional Shares (subject to such adjustments to eliminate fractional shares as you may determine) that bears the same proportion to the total number of Additional Shares to be purchased as the number of Firm Shares set forth in SCHEDULE A hereto opposite the name of such Underwriter bears to the total number of Firm Shares.

3.3. MARKET STANDOFF PROVISION. The Company hereby agrees that, without the prior written consent of Thomas Weisel Partners, it will not, during the period ending 180 days after the date of the Prospectus, (i) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock or (ii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the Common Stock, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Common Stock or such other securities, in cash or otherwise. The foregoing sentence shall not apply to (A) the Shares to be sold by the Company hereunder, (B) the issuance by the Company of shares of Common Stock upon the exercise of options or warrants or the conversion of a security outstanding on the date hereof of which the Underwriters have been advised in writing or which is described in the Prospectus, (C) the award of options under the Company's stock plans in the ordinary course of business consistent with past practices that are not exercisable within 180 days from the date of the Prospectus or (D) the Company's issuance of shares of Common Stock in connection with the acquisition by the Company of another company or entity or any other strategic partnership or other joint venture, provided that the terms of such issuance contractually prohibit the resale or other disposition of such shares of Common Stock within 180 days from the date of the Prospectus. The Selling Stockholder, agrees that, without the prior written consent of Thomas Weisel Partners, it will not, during the period ending 180 days after the date of the Prospectus, make any demand for, or exercise any right with respect to, the registration of any shares of Common Stock or any security convertible into or exercisable or exchangeable for Common Stock.

3.4. TERMS OF PUBLIC OFFERING. The Sellers are advised by you that the Underwriters propose to make a public offering of their respective portions of the Shares as soon after the Registration Statement and this Agreement have become effective as in your judgment is advisable. The Sellers are further advised by you that the Shares are to be offered to the public initially at $_____ a share (the "PUBLIC OFFERING PRICE") and to certain dealers selected by you at a price that represents a concession not in excess of $_____ a share less than the Public Offering Price, and that any Underwriter may allow, and such dealers may reallow, a concession, not in excess of $_____ a share, to any Underwriter or to certain other dealers.

4. PAYMENT AND DELIVERY.

4.1. FIRM SHARES. Payment for the Firm Shares to be sold by each Seller shall be made to such Seller by wire transfer in immediately available funds against delivery of such Firm Shares for the respective accounts of the several Underwriters at 10:00 a.m., New York City time, on December 11, 2000 or at such other time on the same or such other date, not later than December 12, 2000 as shall be designated in writing by you. The time and date of such payment are hereinafter referred to as the "CLOSING DATE".

4.2. ADDITIONAL SHARES. Payment for any Additional Shares shall be made to the Company by wire transfer in immediately available funds in New York City against delivery of such Additional Shares for the respective accounts of the several Underwriters at 10:00 a.m., New York City time, on the date specified in the notice described in Section 3.2 or at such other time on the same or on such other date, in any event not later than January 20, 2001 as shall be designated in writing by you. The time and date of such payment are hereinafter referred to as the "OPTION CLOSING DATE".

4.3. DELIVERY OF CERTIFICATES. Certificates for the Firm Shares and the Additional Shares, if any, shall be in definitive form and registered in such names and in such denominations as you shall request in writing not later than two (2) full business days prior to the Closing Date or the Option Closing Date, as the case may be. The certificates evidencing the Firm Shares and Additional Shares shall be delivered to you on the Closing Date or the Option Closing Date, as the case may be, for the respective accounts of the several Underwriters, with any transfer taxes payable in connection with the transfer of the Shares to the Underwriters duly paid, against payment of the Purchase Price therefor.

5. COVENANTS OF THE COMPANY. In further consideration of the agreements of the Underwriters herein contained, the Company covenants with each Underwriter as follows:

5.1. FURNISH COPIES OF REGISTRATION STATEMENT AND PROSPECTUS. To furnish to you, without charge, [NUMBER OF REPRESENTATIVES PLUS ONE] copies of the signed Registration Statement (including exhibits thereto) and for delivery to each other Underwriter a conformed copy of the Registration Statement (without exhibits thereto) and to furnish to you in New York City, without charge, prior to 10:00 a.m. New York City time on the business day next succeeding the date of this Agreement and during the period mentioned in Section 5.3 below, as many copies of the Prospectus and any supplements and amendments thereto or to the Registration Statement as you may reasonably request, provided that copies of any such amendment or supplement made nine months or more after the issue date of the Prospectus shall be at the expense of the Underwriters.

5.2. NOTIFICATION OF AMENDMENTS OR SUPPLEMENTS. Before amending or supplementing the Registration Statement or the Prospectus, to furnish to you a copy of each such proposed amendment or supplement and not to file any such proposed amendment or supplement to which you promptly and reasonably object in writing, and to file with the Commission within the applicable period specified in Rule 424(b) under the Securities Act any prospectus required to be filed pursuant to such rule.

5.3. FILINGS OF AMENDMENTS OR SUPPLEMENTS. If, during such period after the first date of the public offering of the Shares as in the opinion of counsel for the Underwriters the Prospectus is required by law to be delivered in connection with sales by an Underwriter or dealer (the "PROSPECTUS DELIVERY PERIOD"), any event shall occur or condition exist as a result of which it is necessary to amend or supplement the Prospectus in order to make the statements therein, in the light of the circumstances when the Prospectus is delivered to a purchaser, not misleading, or if, in the opinion of counsel for the Underwriters, it is

necessary to amend or supplement the Prospectus to comply with applicable law, forthwith to prepare, file with the Commission and furnish, at its own expense, to the Underwriters and to the dealers (whose names and addresses you will furnish to the Company) to which Shares may have been sold by you on behalf of the Underwriters and to any other dealers upon request, either amendments or supplements to the Prospectus so that the statements in the Prospectus as so amended or supplemented will not, in the light of the circumstances when the Prospectus is delivered to a purchaser, be misleading or so that the Prospectus, as amended or supplemented, will comply with law and in the case any Underwriter is required by law to deliver a prospectus in connection with sales of any of the Shares at any time nine months or more after the time of issue of the Prospectus, upon your request but at the expense of such Underwriter, to prepare and deliver to such Underwriter as many copies as you may request of an amended or supplemented Prospectus complying with Section 10(a)(3) of the Securities Act.

5.4. BLUE SKY LAWS. To endeavor to qualify the Shares for offer and sale under the securities or Blue Sky laws of such jurisdictions as you shall reasonably request.

5.5. EARNINGS STATEMENT. To make generally available to its securityholders as soon as practicable, but in any event not later than eighteen (18) months after the effective date of the Registration Statement (as defined in Rule 158(c) under the Securities Act), an earnings statement of the Company and its subsidiaries (which need not be audited) complying with Section 11(a) of the Securities Act and the rules and regulations thereunder (including, at the option of the Company, Rule 158).

5.6. USE OF PROCEEDS. To apply the net proceeds from the sale of the Shares sold by it in the manner described under the caption "Use of Proceeds" in the Prospectus.

5.7. TRANSFER AGENT. To engage and maintain, at its expense, a registrar and transfer agent for the Common Stock.

5.8. INTENTIONALLY OMITTED

5.9. DIRECTED SHARE PROGRAM. That in connection with the Directed Share Program, the Company will ensure that the Directed Shares will be restricted to the extent required by the National Association of Securities Dealers, Inc. (the "NASD") or the NASD rules from sale, transfer, assignment, pledge or hypothecation for a period of three (3) months following the date of the effectiveness of the Registration Statement. Thomas Weisel Partners will notify the Company as to which Participants will need to be so restricted. The Company will direct the transfer agent to place stop transfer restrictions upon such securities for such period of time.

5.10. EXCHANGE ACT COMPLIANCE. During the Prospectus Delivery Period, the Company will file all documents required to be filed with the Commission pursuant to Section 13, 14 or 15 of the Exchange Act in the manner and within the time periods required by the Exchange Act.

6. CONDITIONS TO CLOSING. The obligations of the Sellers to sell the Shares to the several Underwriters and the several obligations of the Underwriters to purchase and pay for the Shares on the Closing Date are subject to the following conditions:

6.1. EFFECTIVE REGISTRATION STATEMENT. The Registration Statement shall have become effective not later than 4:30 p.m. (New York City time) on the date hereof.

6.2. RULE 462 REGISTRATION STATEMENT. If the Company elects to rely upon Rule 462(b), the Company shall file a Rule 462 Registration Statement with the Commission in compliance with Rule 462(b) within the applicable time period prescribed for such filing by the rules and regulations of the Securities Act, and the Company shall at the time of filing either pay to the Commission the filing fee for the Rule 462 Registration Statement or give irrevocable instructions for the payment of such fee pursuant to Rule 111(b) under the Securities Act.

6.3. PROSPECTUS FILED WITH COMMISSION. The Company shall have filed the Prospectus with the Commission (including the information required by Rule 430A under the Securities Act) in the manner and within the time period required by Rule 424(b) under the Securities Act; or the Company shall have filed a post-effective amendment to the Registration Statement containing the information required by such Rule 430A, and such post-effective amendment shall have become effective; or, if the Company elected to rely upon Rule 434 under the Securities Act and obtained the Representatives' consent thereto, the Company shall have filed a term sheet with the Commission in the manner and within the time period required by such Rule 424(b).

6.4. NO STOP ORDER. No stop order suspending the effectiveness of the Registration Statement, any Rule 462 Registration Statement, or any post-effective amendment to the Registration Statement, shall be in effect and no proceedings for such purpose shall have been initiated or threatened by the Commission.

6.5. INTENTIONALLY OMITTED

6.6. INTENTIONALLY OMITTED

6.7. NO MATERIAL ADVERSE CHANGE. There shall not have occurred any change in the financial condition or in the earnings, business or operations of the Company and its subsidiaries, taken as a whole, from that set forth in the Prospectus (exclusive of any amendments or supplements thereto subsequent to the date of this Agreement) that, in the reasonable judgment of the Representatives, is material and adverse and that makes it, in the reasonable judgment of the Representatives, impracticable to market the Shares on the terms and in the manner contemplated in the Prospectus.

6.8. OFFICER'S CERTIFICATE. The Underwriters shall have received on the Closing Date a certificate, dated the Closing Date and signed by the Chief Executive Officer or President of the Company, to the effect that the statements set forth in Sections 6.4 and 6.7 and to the effect that the representations and warranties of the Company contained in this Agreement are true and correct as of the Closing Date and that the Company has complied with all of the agreements and satisfied all of the conditions on its part to be performed or satisfied hereunder on or before the Closing Date.

6.9. OPINION OF COMPANY COUNSEL. The Underwriters shall have received on the Closing Date an opinion of Goodwin, Procter & Hoar LLP, counsel for the Company, dated the Closing Date, the form of which is attached hereto as EXHIBIT A. The opinion shall be rendered to the Underwriters at the request of the Company and shall so state therein.

6.10. OPINION OF SELLING STOCKHOLDERS' COUNSEL. The Underwriters shall have received on the Closing Date an opinion of Goodwin, Procter & Hoar LLP, counsel for the Selling Stockholder, dated the Closing Date, the form of which is attached hereto as EXHIBIT B. The opinion shall be rendered to the Underwriters at the request of the Selling Stockholder and shall so state therein.

6.11. OPINION OF PATENT COUNSEL. The Underwriters shall have received on the Closing Date an opinion of Hale & Dorr LLP, patent counsel for the Company, dated the Closing Date, the form of which is attached hereto as EXHIBIT C. The opinion shall be rendered to the Underwriters at the request of the Company and shall so state therein.

6.12. OPINION OF UNDERWRITERS COUNSEL. The Underwriters shall have received on the Closing Date an opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., counsel for the Underwriters, dated the Closing Date, covering the matters referred to in EXHIBIT A, paragraph (9) (but only as to the statements in the Prospectus under "Description of Capital Stock" and "Underwriters") and (14). With respect to paragraph (14) of EXHIBIT A, such counsel may state that their opinion and belief are based upon their participation in the preparation of the Registration Statement and Prospectus and any amendments or supplements thereto and review and discussion of the contents thereof, but are without independent check or verification, except as specified.

6.13. ACCOUNTANT'S COMFORT LETTER. The Underwriters shall have received, on each of the date hereof and the Closing Date, a letter dated the date hereof or the Closing Date, as the case may be, in form and substance reasonably satisfactory to the Underwriters, from KPMG LLP, independent public accountants, containing statements and information of the type ordinarily included in accountants' "comfort letters" to underwriters with respect to the financial statements and certain financial information contained in the Registration Statement and the Prospectus; PROVIDED that the letter delivered on the Closing Date shall use a "cut-off date" not earlier than the date hereof.

6.14. LOCK-UP AGREEMENTS. The "lock-up" agreements, each substantially in the form of EXHIBIT D hereto, between you and certain stockholders, officers and directors of the Company, shall have been executed and delivered to you on or before the date hereof.

6.15. SELLING STOCKHOLDER'S CERTIFICATE. The Underwriters shall have received on the Closing Date a certificate, dated the Closing Date and signed by or on behalf of such Selling Stockholder, to the effect that the representations and warranties of the Selling Stockholder contained in this Agreement are true and correct as of the Closing Date and that the Selling Stockholder has complied with all of the agreements and satisfied all of the conditions on his part to be performed or satisfied hereunder on or before the Closing Date.

6.16. SELLING STOCKHOLDER DOCUMENTS. On the date hereof, the Company and the Selling Stockholder shall have furnished for review by the Representatives copies of the Powers of Attorney and Custody Agreements executed by each of the Selling Stockholder and such further information, certificates and documents as the Representatives may reasonably request.

6.17. ADDITIONAL DOCUMENTS. On the Closing Date, the Representatives and counsel for the Underwriters shall have received such information, documents and opinions as they may reasonably require for the purposes of enabling them to pass upon the issuance and sale of the Shares as contemplated herein, or in order to evidence the accuracy of any of the representations and warranties, or the satisfaction of any of the conditions or agreements, herein contained.

The several obligations of the Underwriters to purchase Additional Shares hereunder are subject to the satisfaction of each of the above conditions on or prior to the Option Closing Date and to the delivery to you on the Option Closing Date of such documents as you may reasonably request with respect to the good standing of the Company, the due authorization and issuance of the Additional Shares and other matters related to the issuance of the Additional Shares.

7. EXPENSES. Whether or not the transactions contemplated in this Agreement are consummated or this Agreement is terminated, the Company agrees to pay or cause to be paid all expenses incident to the performance of its obligations under this Agreement, including: (i) the fees, disbursements and expenses of the Company's counsel, the Company's accountants and counsel for the Selling Stockholder in connection with the registration and delivery of the Shares under the Securities Act and all other fees or expenses incurred in connection with the preparation and filing of the Registration Statement, any preliminary prospectus, the Prospectus and amendments and supplements to any of the foregoing, including all printing costs associated therewith, and the mailing and delivering of copies thereof to the Underwriters and dealers, in the quantities hereinabove specified, (ii) all costs and expenses related to the transfer and delivery of the Shares to the Underwriters, including any transfer or other taxes payable thereon, (iii) the reasonable costs of printing or producing any Blue Sky or legal investment memorandum in connection with the offer and sale of the Shares under state securities laws and all expenses in connection with the qualification of the Shares for offer and sale under state securities laws as contemplated by Section 5.4 hereof, including filing fees and the reasonable fees and disbursements of counsel for the Underwriters in connection with such qualification and in connection with the Blue Sky or legal investment memorandum, (iv) all filing fees and the reasonable fees and disbursements of counsel to the Underwriters incurred in connection with the review and qualification of the offering of the Shares by the NASD, (v) all fees and expenses in connection with the preparation and filing of the registration statement on Form 8-A relating to the Common Stock and all costs and expenses incident to listing the Shares on the Nasdaq National Market, (vi) the cost of printing certificates representing the Shares, (vii) the costs and charges of any transfer agent, registrar or depositary, (viii) the costs and expenses of the Company relating to investor presentations on any "road show" undertaken in connection with the marketing of the offering of the Shares, including, without limitation, expenses associated with the production of road show slides and graphics, fees and expenses of any consultants engaged in connection with the road show presentations with the prior approval of the Company, travel and lodging expenses of the representatives and officers of the Company and any such consultants, (ix) all expenses in connection with any offer and sale of the Shares outside of the United States, including filing fees and the reasonable fees and disbursements of counsel for the Underwriters in connection with offers and sales outside of the United States, (x) all reasonable fees and disbursements of counsel incurred by the Underwriters in connection with the Directed Share Program and stamp duties, similar taxes or duties or other taxes, if any, incurred by the Underwriters in connection with the Directed Share Program and (xi) all other costs and expenses incident to the performance of the obligations of the Company hereunder for which provision is not otherwise made in this Section. It is understood, however, that except as provided in this Section, Section 8 entitled "Indemnity and Contribution", and the last paragraph of Section 11 below, the Underwriters will pay all of their costs and expenses, including fees and disbursements of their counsel, stock transfer taxes on resale of any of the Shares by them and any advertising expenses connected with any offers they may make.

The provisions of this Section shall not supersede or otherwise affect any agreement that the Sellers may otherwise have for the allocation of such expenses among themselves.

8. INDEMNITY AND CONTRIBUTION.

8.1. INDEMNIFICATION OF THE UNDERWRITERS. The Company agrees to indemnify and hold harmless each Underwriter and each person, if any, who controls any Underwriter within the meaning of either Section 15 of the Securities Act or Section 20 of the Exchange Act, from and against any and all losses, claims, damages and liabilities (including, without limitation, any legal or other expenses reasonably incurred in connection with defending or investigating any such action or claim) (a) caused by any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement or any amendment thereof, any preliminary prospectus or the Prospectus (as amended or supplemented if the Company shall have

furnished any amendments or supplements thereto), or (b) caused by any omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein, in the case of any preliminary prospectus or the Prospectus in light of the circumstances under which they were made, not misleading, except (i) insofar as such losses, claims, damages or liabilities are caused by any such untrue statement or omission or alleged untrue statement or omission based upon information furnished to the Company in writing by or on behalf of any Underwriter expressly for use therein and (ii) that with respect to any preliminary prospectus, the foregoing indemnity agreement shall not inure to the benefit of any Underwriter from whom the person asserting any loss, claim, damage or liability purchased Shares, or any person controlling such Underwriter, if copies of the Prospectus were timely delivered to the Underwriter pursuant to Section 5 and a copy of the Prospectus (as then amended or supplemented if the Company shall have furnished any amendments or supplements thereto) was not sent or given by or on behalf of such Underwriter to such person, if required by law so to have been delivered, at or prior to the written confirmation of the sale of the Shares to such person, and if the Prospectus (as so amended or supplemented) would have cured the defect giving rise to such loss, claim, damage, liability or expense.

8.2. INTENTIONALLY OMITTED

8.3. INDEMNIFICATION OF UNDERWRITERS BY THE SELLING STOCKHOLDER. The Selling Stockholder agrees to indemnify and hold harmless each Underwriter and each person, if any, who controls any Underwriter within the meaning of either Section 15 of the Securities Act or Section 20 of the Exchange Act, from and against any and all losses, claims, damages and liabilities (including, without limitation, any legal or other expenses reasonably incurred in connection with defending or investigating any such action or claim) caused by any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement or any amendment thereof, any preliminary prospectus or the Prospectus (as amended or supplemented if the Company shall have furnished any amendments or supplements thereto), or caused by any omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein, in the case of any preliminary prospectus or the Prospectus in light of the circumstances under which they were made, not misleading, but only with reference to information relating to such Selling Stockholder furnished in writing by or on behalf of such Selling Stockholder expressly for use in the Registration Statement, any preliminary prospectus, the Prospectus or any amendments or supplements thereto, except that with respect to any preliminary prospectus, the foregoing indemnity agreement with respect to the preliminary prospectus shall not inure to the benefit of any Underwriter from whom the person asserting any loss, claim, damage or liability purchased Shares, or any person controlling such Underwriter, if copies of the Prospectus were timely delivered to the Underwriter pursuant to Section 5 and a copy of the Prospectus (as then amended or supplemented if the Company shall have furnished any amendments or supplements thereto) was not sent or given by or on behalf of such Underwriter to such person, if required by law to have been so delivered, at or prior to the written confirmation of the sale of the Shares to such person, and if the Prospectus (as so amended or supplemented) would have cured the defect giving rise to such loss, claim, damage, liability or expense. In no event shall the Selling Stockholder be liable or responsible for indemnification or any other cause of action under this Agreement for any amount in the aggregate in excess of the net proceeds received by the Selling Stockholder with respect to the Shares sold by the Selling Stockholder.

8.4. INDEMNIFICATION BY THE UNDERWRITERS. Each Underwriter agrees, severally and not jointly, to indemnify and hold harmless the Company, the Selling Stockholder, each of the directors of the Company, each of the officers of the Company who sign the Registration Statement and each person, if any, who controls the Company or any Selling Stockholder within the meaning of either Section 15 of the Securities Act or Section 20 of the Exchange Act from and against any and all losses, claims, damages and liabilities (including, without limitation, any legal or other expenses reasonably incurred in connection with

defending or investigating any such action or claim) caused by any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement or any amendment thereof, any preliminary prospectus or the Prospectus (as amended or supplemented if the Company shall have furnished any amendments or supplements thereto), or caused by any omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein, in the case of the Preliminary prospectus or the Prospectus in light of the circumstances under which they were made, not misleading, but only with reference to information furnished to the Company in writing by or on behalf of such Underwriter expressly for use in the Registration Statement, any preliminary prospectus, the Prospectus or any amendments or supplements thereto.

8.5. INDEMNIFICATION PROCEDURES. In case any proceeding (including any governmental investigation) shall be instituted involving any person in respect of which indemnity may be sought pursuant to this Section 8, such person (the "INDEMNIFIED PARTY") shall promptly notify the person against whom such indemnity may be sought (the "INDEMNIFYING PARTY") in writing and the indemnifying party, upon request of the indemnified party, shall retain counsel reasonably satisfactory to the indemnified party to represent the indemnified party and any others the indemnifying party may designate in such proceeding and shall pay the fees and disbursements of such counsel related to such proceeding. In any such proceeding, any indemnified party shall have the right to retain its own counsel, but the fees and expenses of such counsel shall be at the expense of such indemnified party unless (i) the indemnifying party and the indemnified party shall have mutually agreed to the retention of such counsel or (ii) the named parties to any such proceeding (including any impleaded parties) include both the indemnifying party and the indemnified party and representation of both parties by the same counsel would be inappropriate due to actual or potential differing interests between them. It is understood that the indemnifying party shall not, in respect of the legal expenses of any indemnified party in connection with any proceeding or related proceedings in the same jurisdiction, be liable for (i) the fees and expenses of more than one separate firm (IN ADDITION TO ANY LOCAL COUNSEL) for all Underwriters and all persons, if any, who control any Underwriter within the meaning of either Section 15 of the Securities Act or Section 20 of the Exchange Act, (ii) the fees and expenses of more than one separate firm (in addition to any local counsel) for the Company, its directors, its officers who sign the Registration Statement and each person, if any, who controls the Company within the meaning of either such Section and (iii) the fees and expenses of more than one separate firm (in addition to any local counsel) for all Selling Stockholder and all persons, if any, who control any Selling Stockholder within the meaning of either such Section, and that all such fees and expenses shall be reimbursed as they are incurred. In the case of any such separate firm for the Underwriters and such control persons of any Underwriters, such firm shall be designated in writing by Thomas Weisel Partners. In the case of any such separate firm for the Company, and such directors, officers and control persons of the Company, such firm shall be designated in writing by the Company. In the case of any such separate firm for the Selling Stockholder and such control persons of any Selling Stockholder, such firm shall be designated in writing by the persons named as attorneys-in-fact for the Selling Stockholder under the Powers of Attorney. The indemnifying party shall not be liable for any settlement of any proceeding effected without its written consent, but if settled with such consent or if there be a final judgment for the plaintiff, the indemnifying party agrees to indemnify the indemnified party from and against any loss or liability by reason of such settlement or judgment. Notwithstanding the foregoing sentence, if at any time an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for fees and expenses of counsel as contemplated by the second and third sentences of this paragraph, the indemnifying party agrees that it shall be liable for any settlement of any proceeding effected without its written consent if (i) such settlement is entered into more than 30 days after receipt by such indemnifying party of the aforesaid request and (ii) such indemnifying party shall not have reimbursed the indemnified party in accordance with such request prior to the date of such settlement. No indemnifying party shall, without the prior written consent of the indemnified party, effect any settlement of any pending or threatened proceeding in respect of which any indemnified party is or could have been a party and indemnity

could have been sought hereunder by such indemnified party, unless such settlement includes an unconditional release of such indemnified party from all liability on claims that are the subject matter of such proceeding.

Notwithstanding anything contained herein to the contrary, if indemnity may be sought pursuant to Section 8.6 hereof in respect of such action or proceeding, then in addition to such separate firm for the indemnified parties, the indemnifying party shall be liable for the reasonable fees and expenses of not more than one separate firm (IN ADDITION TO ANY LOCAL COUNSEL) for Thomas Weisel Partners for the defense of any losses, claims, damages and liabilities arising out of the Directed Share Program, and all persons, if any, who control Thomas Weisel Partners within the meaning of either Section 15 of the Act or Section 20 of the Exchange Act.

8.6. INDEMNIFICATION FOR DIRECTED SHARE PROGRAM. The Company agrees to indemnify and hold harmless Thomas Weisel Partners and each person, if any, who controls Thomas Weisel Partners within the meaning of either Section 15 of the Securities Act or Section 20 of the Exchange Act ("THOMAS WEISEL PARTNERS ENTITIES"), from and against any and all losses, claims, damages and liabilities (including, without limitation, any legal or other expenses reasonably incurred in connection with defending or investigating any such action or claim) (i) caused by any untrue statement or alleged untrue statement of a material fact contained in the prospectus wrapper material prepared by or with the consent of the Company for distribution in foreign jurisdictions in connection with the Directed Share Program attached to the Prospectus or any preliminary prospectus, or caused by any omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statement therein, when considered in conjunction with the Prospectus or any applicable preliminary prospectus, not misleading; (ii) caused by the failure of any Participant to pay for and accept delivery of the shares which, immediately following the effectiveness of the Registration Statement, were subject to a properly confirmed agreement to purchase; or (iii) related to, arising out of, or in connection with the Directed Share Program, provided that, the Company shall not be responsible under this subparagraph (iii) for any losses, claim, damages or liabilities (or expenses relating thereto) that are finally judicially determined to have resulted from the bad faith or gross negligence of Thomas Weisel Partners Entities. Thomas Weisel Partners hereby agrees in connection with any losses, claims, damages or liabilities for which indemnification is sought pursuant to Section 8.6(ii) or (iii) above, that it shall act in good faith and in a reasonable commercial manner to mitigate any such losses, claims, damages and liabilities.

8.7. CONTRIBUTION AGREEMENT. To the extent the indemnification provided for in this Section 8 is unavailable to an indemnified party or insufficient in respect of any losses, claims, damages or liabilities referred to therein, then each indemnifying party under such paragraph, in lieu of indemnifying such indemnified party thereunder, shall contribute to the amount paid or payable by such indemnified party as a result of such losses, claims, damages or liabilities (or actions in respect thereof) (i) in such proportion as is appropriate to reflect the relative benefits received by the indemnifying party or parties on the one hand and the indemnified party or parties on the other hand from the offering of the Shares or (ii) if the allocation provided by clause 8.7(i) above is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause 8.7(i) above but also the relative fault of the indemnifying party or parties on the one hand and of the indemnified party or parties on the other hand in connection with the statements or omissions that resulted in such losses, claims, damages or liabilities (or actions in respect thereof), as well as any other relevant equitable considerations. The relative benefits received by the Sellers on the one hand and the Underwriters on the other hand in connection with the offering of the Shares shall be deemed to be in the same respective proportions as the net proceeds from the offering of the Shares (before deducting expenses) received by each Seller and the total underwriting discounts and commissions received by the Underwriters, in each case as set forth in the table on the cover of

the Prospectus, bear to the aggregate Public Offering Price of the Shares. The relative fault of the Sellers on the one hand and the Underwriters on the other hand shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Sellers or by the Underwriters and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission. The Underwriters' respective obligations to contribute pursuant to this Section 8 are several in proportion to their respective underwriting commitments, and not joint.

8.8. CONTRIBUTION AMOUNTS. The Sellers and the Underwriters agree that it would not be just or equitable if contribution pursuant to this Section 8 were determined by PRO RATA allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation that does not take account of the equitable considerations referred to in Section 8.7. The amount paid or payable by an indemnified party as a result of the losses, claims, damages and liabilities referred to in the immediately preceding paragraph shall be deemed to include, subject to the limitations set forth above, any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim. Notwithstanding the provisions of this Section 8.8, no Underwriter shall be required to contribute any amount in excess of the amount by which the total price at which the Shares underwritten by it and distributed to the public were offered to the public exceeds the amount of any damages that such Underwriter has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission, and the Selling Stockholder shall not be required to contribute any amount in excess of the net proceeds received by such Selling Stockholder with respect to the Shares sold by such Selling STOCKHOLDER. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The remedies provided for in this Section 8 are not exclusive and shall not limit any rights or remedies which may otherwise be available to any indemnified party at law or in equity; provided, however, the remedies as to the Selling Stockholder shall be limited as set forth in the last sentence of Section 8.3.

9. SURVIVAL. The respective indemnity and contribution provisions, agreements, representations, warranties and other statements of the Company, the Selling Stockholder and the several Underwriters contained in this Agreement or made by or on behalf of them respectively, pursuant to this Agreement shall remain in full force and effect regardless of (i) any termination of this Agreement, (ii) any investigation made by or on behalf of any Underwriter or any person controlling any Underwriter, any Selling Stockholder or any person controlling any Selling Stockholder, or the Company, its officers or directors or any person controlling the Company and (iii) delivery of and payment for any of the Shares.

10. EFFECTIVENESS. This Agreement shall become effective upon the execution and delivery hereof by the parties hereto.

11. TERMINATION. This Agreement shall be subject to termination by notice given by you to the Company, if (a) after the execution and delivery of this Agreement and prior to the Closing Date (i) trading generally shall have been suspended or materially limited on or by, as the case may be, any of the New York Stock Exchange, the National Association of Securities Dealers, Inc., or the Nasdaq National Market ("Nasdaq"), (ii) trading of any securities of the Company shall have been suspended by Nasdaq, (iii) a general moratorium on commercial banking activities in New York, Delaware or California shall have been declared by either federal or New York, Delaware or California state authorities or (iv) there shall have occurred any outbreak or escalation of hostilities or any change in financial markets or any calamity or crisis that, in your reasonable judgment, is material and adverse, or (v) in the reasonable judgment of the Representatives, there shall have occurred any material adverse change, or any development that could

reasonably be expected to result in a material adverse change, in the financial condition or in the earnings, business or operations, whether or not arising from transactions in the ordinary course of business, of the Company and its subsidiaries, taken as a whole, and (b) in the case of any of the events specified in clauses 11(a)(i) through 11(a)(v), such event, individually or together with any other such event, makes it, in your reasonable judgment, impracticable to market the Shares on the terms and in the manner contemplated in the Prospectus.

12. DEFAULTING UNDERWRITERS. If, on the Closing Date or the Option Closing Date, as the case may be, any one or more of the Underwriters shall fail or refuse to purchase Shares that it has or they have agreed to purchase hereunder on such date, and the aggregate number of Shares which such defaulting Underwriter or Underwriters agreed but failed or refused to purchase is not more than one-tenth of the aggregate number of the Shares to be purchased on such date, the other Underwriters shall be obligated severally in the proportions that the number of Firm Shares set forth opposite their respective names in SCHEDULE A bears to the aggregate number of Firm Shares set forth opposite the names of all such non-defaulting Underwriters, or in such other proportions as you may specify, to purchase the Shares which such defaulting Underwriter or Underwriters agreed but failed or refused to purchase on such date; PROVIDED that in no event shall the number of Shares that any Underwriter has agreed to purchase pursuant to this Agreement be increased pursuant to this Section 12 by an amount in excess of one-ninth of such number of Shares without the written consent of such Underwriter. If, on the Closing Date, any Underwriter or Underwriters shall fail or refuse to purchase Firm Shares and the aggregate number of Firm Shares with respect to which such default occurs is more than one-tenth of the aggregate number of Firm Shares to be purchased, and arrangements satisfactory to you, the Company and the Selling Stockholder for the purchase of such Firm Shares are not made within 36 hours after such default, this Agreement shall terminate without liability on the part of any non-defaulting Underwriter, the Company or the Selling Stockholder. In any such case either you or the relevant Sellers shall have the right to postpone the Closing Date, but in no event for longer than seven (7) days, in order that the required changes, if any, in the Registration Statement and in the Prospectus or in any other documents or arrangements may be effected. If, on the Option Closing Date, any Underwriter or Underwriters shall fail or refuse to purchase Additional Shares and the aggregate number of Additional Shares with respect to which such default occurs is more than one-tenth of the aggregate number of Additional Shares to be purchased, the non-defaulting Underwriters shall have the option to (i) terminate their obligation hereunder to purchase Additional Shares or (ii) purchase not less than the number of Additional Shares that such non-defaulting Underwriters would have been obligated to purchase in the absence of such default. Any action taken under this paragraph shall not relieve any defaulting Underwriter from liability in respect of any default of such Underwriter under this Agreement.

If this Agreement shall be terminated by the Underwriters, or any of them, because of any failure or refusal on the part of any Seller to comply with the terms or to fulfill any of the conditions of this Agreement, or if for any reason any Seller shall be unable to perform its obligations under this Agreement, the Sellers will reimburse the Underwriters or such Underwriters as have so terminated this Agreement with respect to themselves, severally, for all out-of-pocket expenses (including the fees and disbursements of their counsel) reasonably incurred by such Underwriters in connection with this Agreement or the offering contemplated hereunder.

13. COUNTERPARTS. This Agreement may be signed in counterparts, each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument.

14. HEADINGS; TABLE OF CONTENTS. The headings of the sections of this Agreement have been inserted for convenience of reference only and shall not be deemed a part of this Agreement.

15. NOTICES. All communications hereunder shall be in writing and shall be mailed, hand delivered or telecopied and confirmed to the parties hereto as follows:

If to the Representatives:

Thomas Weisel Partners LLC
One Montgomery Street, Suite 3700
San Francisco, California 94104
Facsimile: (415) 364-2694
Attention: E. James Streator III

with a copy to:

Thomas Weisel Partners LLC
One Montgomery Street, Suite 3700
San Francisco, California 94104
Facsimile: (415) 364-2694
Attention: David A. Baylor, Esq.

and

Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.
One Financial Center
Boston, MA 02111
Facsimile (617) 542-2241
Attention: Stanford N. Goldman, Jr., Esq.

If to the Company:

Harvard Bioscience, Inc.
84 October Hill Road
Holliston, MA 01746
Facsimile: (508) 429-8478
Attention: Chane Graziano, CEO

with a copy to:

Goodwin, Procter & Hoar LLP
Exchange Place
Boston, MA 02109
Facsimile: (617) 523-1231
Attention: H. David Henken, P.C.

If to the Selling Stockholder:

David Green
c/o Harvard Bioscience, Inc.
84 October Hill Road
Holliston, MA 01746
Facsimile: (508) 429-8478

with a copy to:

Goodwin, Procter & Hoar LLP
Exchange Place
Boston, MA 02109
Facsimile: (617) 523-1231
Attention: H. David Henken, P.C.

Any party hereto may change the address for receipt of communications by giving written notice to the others.

16. SUCCESSORS. This Agreement will inure to the benefit of and be binding upon the parties hereto, including any substitute Underwriters pursuant to Section 12 hereof, and to the benefit of the officers and directors and controlling persons referred to in Section 8, and in each case their respective successors, and no other person will have any right or obligation hereunder. The term "successors" shall not include any purchaser of the Shares as such from any of the Underwriters merely by reason of such purchase.

17. PARTIAL UNENFORCEABILITY. The invalidity or unenforceability of any Section, paragraph or provision of this Agreement shall not affect the validity or enforceability of any other Section, paragraph or provision hereof. If any Section, paragraph or provision of this Agreement is for any reason determined to be invalid or unenforceable, there shall be deemed to be made such minor changes (and only such minor changes) as are necessary to make it valid and enforceable.

18. GOVERNING LAW. THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE INTERNAL LAWS OF THE STATE OF NEW YORK APPLICABLE TO AGREEMENTS MADE AND TO BE PERFORMED IN SUCH STATE.

19. CONSENT TO JURISDICTION. Any legal suit, action or proceeding arising out of or based upon this Agreement or the transactions contemplated hereby ("RELATED PROCEEDINGS") may be instituted in the federal courts of the United States of America located in the New York City or the courts of the State of New York in each case located in the New York City (collectively, the "SPECIFIED COURTS"), and each party irrevocably submits to the exclusive jurisdiction (except for proceedings instituted in regard to the enforcement of a judgment of any such court (a "RELATED JUDGMENT"), as to which such jurisdiction is non-exclusive) of such courts in any such suit, action or proceeding. Service of any process, summons, notice or document by mail to such party's address set forth above shall be effective service of process for any suit, action or other proceeding brought in any such court. The parties irrevocably and unconditionally waive any objection to the laying of venue of any suit, action or other proceeding in the Specified Courts and irrevocably and unconditionally waive and agree not to plead or claim in any such court that any such suit, action or other proceeding brought in any such court has been brought in an inconvenient forum. Each party not located in the United States irrevocably appoints CT Corporation System, which currently maintains an

office in New York City, United States of America, as its agent to receive service of process or other legal summons for purposes of any such suit, action or proceeding that may be instituted in any state or federal court in New York City.

20. WAIVER OF IMMUNITY. With respect to any Related Proceeding, each party irrevocably waives, to the fullest extent permitted by applicable law, all immunity (whether on the basis of sovereignty or otherwise) from jurisdiction, service of process, attachment (both before and after judgment) and execution to which it might otherwise be entitled in the Specified Courts, and with respect to any Related Judgment, each party waives any such immunity in the Specified Courts or any other court of competent jurisdiction, and will not raise or claim or cause to be pleaded any such immunity at or in respect of any such Related Proceeding or Related Judgement, including, without limitation, any immunity pursuant to the United States Foreign Sovereign Immunities Act of 1976, as amended.

21. FAILURE OF THE SELLING STOCKHOLDER TO SELL AND DELIVER SHARES. If the Selling Stockholder shall fail to sell and deliver to the Underwriters the Shares to be sold and delivered by such Selling Stockholder at the Closing Date pursuant to this Agreement, then the Underwriters may at their option, by written notice from the Representatives to the Company and the Selling Stockholder, either (i) terminate this Agreement without any liability on the part of any Underwriter or, except as provided in Sections 7 and 8 hereof, the Company or the Selling Stockholder, or (ii) purchase the shares which the Company and other Selling Stockholder have agreed to sell and deliver in accordance with the terms hereof. If the Selling Stockholder shall fail to sell and deliver to the Underwriters the Shares to be sold and delivered by such Selling Stockholder pursuant to this Agreement at the Closing Date or the Option Closing Date, then the Underwriters shall have the right, by written notice from the Representatives to the Company and the Selling Stockholder, to postpone the Closing Date or the Option Closing Date, as the case may be, but in no event for longer than seven (7) days in order that the required changes, if any, to the Registration Statement and the Prospectus or any other documents or arrangements may be effected.

22. ENTIRE AGREEMENT. This Agreement constitutes the entire agreement of the parties to this Agreement and supersedes all prior written or oral and all contemporaneous oral agreements, understandings and negotiations with respect to the subject matter hereof.

23. AMENDMENTS. This Agreement may only be amended or modified in writing, signed by all of the parties hereto, and no condition herein (express or implied) may be waived unless waived in writing by each party whom the condition is meant to benefit.

24. SOPHISTICATED PARTIES. Each of the parties hereto acknowledges that it is a sophisticated business person who was adequately represented by counsel during negotiations regarding the provisions hereof, including, without limitation, the indemnification and contribution provisions of Section 8, and is fully informed regarding said provisions. Each of the parties hereto further acknowledges that the provisions of Section 8 hereto fairly allocate the risks in light of the ability of the parties to investigate the Company, its affairs and its business in order to assure that adequate disclosure has been made in the Registration Statement, any preliminary prospectus and the Prospectus (and any amendments and supplements thereto), as required by the Securities Act and the Exchange Act.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

If the foregoing is in accordance with your understanding of our agreement, kindly sign and return to the Company the enclosed copies hereof, whereupon this instrument, along with all counterparts hereof, shall become a binding agreement in accordance with its terms.

Very truly yours,

HARVARD BIOSCIENCE, INC.

By:

Name:
Title:

The Selling Stockholder
named in Schedule B hereto,
acting severally

By:

Attorney-in-Fact

Accepted as of the date hereof

Thomas Weisel Partners LLC
Dain Rauscher Incorporated
ING Barings LLC

Acting severally on behalf
of themselves and the
several Underwriters named
in Schedule A hereto.

By: Thomas Weisel Partners LLC

By:

Name:
Title:

SCHEDULE A

UNDERWRITER	NUMBER OF FIRM SHARES TO BE PURCHASED	NUMBER OF ADDITIONAL SHARES TO BE PURCHASED IF MAXIMUM OPTION EXERCISED
Thomas Weisel Partners LLC		
Dain Rauscher Incorporated		
ING Barings LLC		
[NAMES OF OTHER UNDERWRITERS]		
total		

SCHEDULE B

SELLING STOCKHOLDER	NUMBER OF FIRM SHARES TO BE SOLD
DAVID GREEN	
Total	

EXHIBIT A

FORM OF LEGAL OPINION OF COMPANY COUNSEL

THE FINAL OPINION IN DRAFT FORM SHOULD BE ATTACHED AS EXHIBIT A AT THE TIME THIS AGREEMENT IS EXECUTED.

1. The Company is a corporation duly incorporated, validly existing and in good standing under the laws of the jurisdiction of its incorporation, has the corporate power to conduct its business as described in the Prospectus and is qualified to transact business as a foreign corporation and is in good standing in each jurisdiction listed on Annex A to this opinion.

2. Each subsidiary of the Company is a corporation validly existing and in good standing under the laws of the jurisdiction of its incorporation, has the corporate power to conduct its business as described in the Prospectus and is qualified to transact business as a foreign corporation and is in good standing in each jurisdiction listed next to its name on Annex B to this opinion.

3. All of the issued and outstanding shares of capital stock of the Company have been duly authorized and validly issued and are fully paid and non-assessable, free and clear of all liens, encumbrances, or claims. All of the issued and outstanding shares of capital stock of each subsidiary of the Company have been duly authorized and validly issued, are fully paid and non-assessable and are owned of record by the Company or by a wholly-owned subsidiary of the Company, free and clear of all liens, encumbrances, equities or claims, except as disclosed in the Prospectus and any liens, encumbrances, equities or claims generally placed on the Company's assets in the ordinary course of business.

4. The authorized capital stock of the Company conforms, in all material respects, as to legal matters to the description thereof contained in the Prospectus.

5. The shares of Common Stock (including the Shares to be sold by the Selling Stockholder) outstanding prior to the issuance of the Shares to be sold by the Company have been duly authorized and are validly issued, fully paid and non-assessable.

6. The Shares to be sold by the Company have been duly authorized and, when issued and delivered in accordance with the terms of the Underwriting Agreement, will be validly issued, fully paid and non-assessable, and the issuance of such Shares will not be subject to any statutory preemptive or other similar rights under the Company's certificate of incorporation, by-laws or, to such counsel's knowledge, any agreement to which the Company is a party.

7. The Underwriting Agreement has been duly authorized, executed and delivered by the Company.

8. The execution and delivery by the Company of, and the performance by the Company of its obligations under, the Underwriting Agreement will not (i) result in any violation of the provisions of the certificate of incorporation or by-laws of the Company or, (ii) result in a breach or default on the part of the Company under any agreement or other instrument filed as an exhibit to the Registration Statement, or of which such counsel has knowledge, to which the Company or any of its subsidiaries is a party or by which the Company or any of its subsidiaries is bound, (iii) result in a violation on the part of the Company of any

existing Massachusetts, Delaware General Corporation Law or federal statute or regulation or, to such counsel's knowledge, any judgment, order or decree of any body, agency or court and no consent, approval, authorization or order of, or qualification with, any Massachusetts or federal body or agency is required to be obtained by the Company for the performance by the Company of its obligations under this Agreement, except that such counsel need express no opinion as to state securities or "Blue Sky" laws or as to compliance with the antifraud provisions of federal and state securities laws.

9. The statements (A) in the Prospectus under the caption "Benefit Plans," "Description of Capital Stock" and "Shares Eligible for Future Sale" and (B) in the Registration Statement in Items 14 and 15, in each case insofar as such statements constitute summaries of the legal matters, documents or proceedings referred to therein, are accurate summaries in all material respects of the matters referred to therein.

10. To such counsel's knowledge, there are no legal or governmental proceedings pending or threatened to which the Company or any of its subsidiaries is a party or to which any of the properties of the Company or any of its subsidiaries is subject that are required to be described in the Registration Statement or the Prospectus and are not so described or of any statutes, regulations, contracts or other documents that are required to be described in the Registration Statement or the Prospectus or to be filed as exhibits to the Registration Statement that are not described or filed as required.

11. The Company is not and, after giving effect to the offering and sale of the Shares and the application of the proceeds thereof as described in the Prospectus, will not be an "investment company" as such term is defined in the Investment Company Act of 1940, as amended.

Such counsel shall also state that as counsel to the Company, they have reviewed the Registration Statement and the Prospectus, participated in discussions with your representatives, those of counsel for the Underwriters, and those of the Company and its accountants. On the basis of the information that such counsel gained in the course of the performance of the services referred to above, considered in the light of such counsel's understanding of the applicable law and the experience such counsel has gained through its practice under the Securities Act, such counsel will confirm to you that (i) such counsel believes that the Registration Statement, as of its effective date, and the Prospectus, as of the date of the Prospectus, appeared on their face to be appropriately responsive in all material respects to the requirements of the Securities Act and the applicable rules and regulations thereunder and (ii) nothing that came to such counsel's attention in the course of such review has caused such counsel to believe the Registration Statement, as of its effective date, contained any untrue statement of a material fact or omitted to state any material fact required to be stated therein or necessary to make the statements therein not misleading, or that the Prospectus contained any untrue statement of a material fact or omitted to state any material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading.

In addition, such counsel does not know of any litigation or any governmental proceeding instituted or threatened against the Company or its subsidiaries that would be required to be disclosed in the Prospectus that is not so disclosed. Also, such counsel does not know of any documents that are required to be filed as exhibits to the Registration Statement and are not so filed or of any documents that are required to be summarized in the Registration Statement and the Prospectus that are not so summarized.

The limitations inherent in the independent verification of factual matters and the character of determinations involved in the registration process are such, however, that such counsel need not assume any responsibility for the accuracy, completeness or fairness of the statements contained in the Registration Statement except for those made under the captions "Benefit Plans," "Description of Capital Stock" and

"Shares Eligible for Future Sale" in the Prospectus, insofar as they accurately summarize in all material respects the provisions of the laws and documents referred to therein. Also, such counsel need not express any belief as to the financial statements, other financial, statistical industry or operating data and related schedules contained in the Registration Statement or the Prospectus.

EXHIBIT B

FORM OF LEGAL OPINION OF SELLING STOCKHOLDER'S COUNSEL

THE FINAL OPINION IN DRAFT FORM SHOULD BE ATTACHED AS EXHIBIT B AT THE TIME THIS AGREEMENT IS EXECUTED.

1. The Underwriting Agreement has been duly executed and delivered by or on behalf of the Selling Stockholder.

2. The execution and delivery by the Selling Stockholder of, and the performance by such Selling Stockholder of its obligations under, the Underwriting Agreement and the Custody Agreement and Powers of Attorney of the Selling Stockholder, will not (i) to such counsel's knowledge, result in a breach or default on the part of the Selling Stockholder under any agreement or other instrument as an exhibit to the Registration Statement to which such Selling Stockholder is a party or by which the Selling Stockholder is bound or (ii) result in a violation on the part of the Selling Stockholder of any existing Massachusetts, Delaware General Corporation or federal statute or regulation or, to such counsel's knowledge, any judgment, order or decree of any body, agency or court, and no consent, approval, authorization or order of, or qualification with, any Massachusetts or federal body or agency is required for the performance by such Selling Stockholder of its obligations under the Underwriting Agreement or the Custody Agreement or Power of Attorney of such Selling Stockholder, except that such counsel need express no opinion as to state securities or "Blue Sky" laws or as to compliance with the antifraud provisisons of the federal and state securities laws.

3. Upon delivery by the custodian to the Underwriters of the certificates for the Shares to be sold by the Selling Stockholder pursuant to the Underwriting Agreement duly endorsed for transfer, and upon payment therefor in accordance with the terms of the Underwriting Agreement, the Underwriters who have severally purchased such Shares pursuant to the Underwriting Agreement will acquire all the rights in such Shares that the Selling Stockholder had or had the power to transfer free of any adverse claim, assuming for the purposes of this opinion that the Underwriters purchased the same without notice of any adverse claim to such Shares.

4. The Custody Agreement and the Power of Attorney of the Selling Stockholder have been duly authorized, executed and delivered by such Selling Stockholder and each such document constitutes a valid and binding obligation of such Selling Stockholder.

Such counsel may rely with respect to factual matters and to the extent such counsel deems appropriate, upon the representations of the Selling Stockholder contained in the Underwriting Agreement and in the Custody Agreement and Power of Attorney of such Selling Stockholder and in other documents and instruments; provided that copies of such Custody Agreement and Power of Attorney and of any such other documents shall be delivered to counsel to the Underwriters and shall be in form and substance satisfactory to counsel to the Underwriters.

EXHIBIT C

FORM OF PATENT OPINION OF COMPANY COUNSEL

THE FINAL OPINION IN DRAFT FORM SHOULD BE ATTACHED AS EXHIBIT C at the TIME THIS AGREEMENT IS EXECUTED.

1. Based upon such counsel's (a) inquiry of the Company's representatives responsible for patent matters and (b) such counsel's review of the chain of title records that the Company's representative provided from the United States Patent and Trademark Office ("USPTO") for the United States patents and patent applications that the Company's representative provided, (i) to such counsel's knowledge, the patent and pending patent applications that are listed on Schedule A to the opinion ("Patents") have been validly assigned to the Company or all inventors on such Patents are under an obligation to assign all of their rights in such Patents to the Company, and (ii) except as provided in Schedule A, the Company is listed as the sole holder of record of each of the Patents. Except as provided in Schedule A, such counsel knows of no claim of a third party to any ownership interest in, or to any lien with respect to, any of the Patents. Except as provided in Schedule A, such counsel knows of no claim of a third party to any ownership interest in, or to any lien with respect to, any of the Patents, and knows of no nonjoined inventorship interest in any of the Patents who is not under an obligation to assign his or her interest in the invention to the Company. To such counsel's knowledge and based upon inquiry of the Company's representatives responsible for patent matters, but without inquiring into the dockets of any court, commission, administrative agency, or other government body, no claim, action, or suit or proceeding is presently pending or threatened against the Company relating to the potential infringement of, or conflict with, any patents or others. Except as provided on Schedule A, none of the Patents has been abandoned, lapsed, or been finally determined to be unpatentable, invalid, unregisterable, or unenforceable by any court or administrative tribunal having jurisdiction over any such matter.

2. No fact has come to such counsel's attention that such counsel believes is material to the examination of the patent applications that is not of record or will not be made of record in the relevant application files of the USPTO. No fact has come to such counsel's attention that causes such counsel to believe that any Patent is unpatentable, unregisterable, invalid or unenforceable.

3. Without limiting the foregoing, we have not undertaken any independent investigation to determine the existence or absence of such facts, and no inference as to our knowledge of the existence or absence of such fact, should be drawn from the fact of our representation of the Company in its patent matters. To such counsel's knowledge and based upon inquiry of the Company's representatives responsible for patent matters, but without inquiring into the dockets of any court, commission, administrative agency, or other government body, there are no threatened interference, opposition, public use, reexamination, reissue, or protest proceedings with respect to any Patent.

4. Based upon inquiry of the Company's representatives responsible for patent matters, the patents and pending patent applications listed on Schedule B to the opinion have been licensed to the Company.

5. No facts have come to such counsel's attention which cause such counsel to believe that the statements in the Prospectus relating to patent and trademark matters under the caption "If we are unable to protect our proprietary methods and technologies, we may not be able to operate our business profitably" in "Risk Factors" and the caption "Intellectual Property" in "Business" result in the Prospectus containing an untrue or misleading statement of material fact, or omitting a material fact necessary to make the

statements therein not misleading. There can be no assurance that all material facts were disclosed to us, or that our familiarity with the Company is such that we have necessarily recognized the materiality of such facts as were disclosed to us, and we have to a large extent relied upon statements of representatives of the Company as to the materiality of the facts disclosed to us.

EXHIBIT D
FORM OF LOCK-UP AGREEMENT

_____, 2000

Thomas Weisel Partners LLC
ING Barings LLC
As Representatives of the several Underwriters
c/o Thomas Weisel Partners LLC
One Montgomery Street, Suite 3700
San Francisco, California 94104

Re: LOCK-UP AGREEMENT (THE "AGREEMENT")

Ladies and Gentlemen:

The undersigned is an owner of record or beneficially of certain shares of Common Stock, par value $.01 per share (the "Common Stock"), of Harvard Apparatus, Inc. or securities convertible into or exchangeable or exercisable for Common Stock. In connection with the Public Offering (as defined below), Harvard Apparatus, Inc. will be reincorporated by merger in Delaware as Harvard Bioscience, Inc. References herein to the "Company" include Harvard Apparatus, Inc., a Massachusetts corporation, and its successor, Harvard Bioscience, Inc., a Delaware corporation, as applicable. The undersigned understands that you, as representatives (the "Representatives"), propose to enter into an Underwriting Agreement on behalf of the several Underwriters named in SCHEDULE A to such agreement (collectively, the "Underwriters"), with the Company providing for a public offering of the Common Stock of the Company pursuant to a Registration Statement on form S-1 to be filed with the Securities and Exchange Commission (the "Public Offering"). The undersigned recognizes that the Public Offering will be of benefit to the undersigned and will benefit the Company by, among other things, raising additional capital for its operations. The undersigned acknowledges that you and the other Underwriters are relying on the representations and agreements of the undersigned contained in this letter in carrying out the Public Offering and in entering into underwriting arrangements with the Company with respect to the Public Offering.

To induce the Underwriters that may participate in the Public Offering to continue their efforts in connection with the Public Offering, the undersigned hereby agrees that, without the prior written consent of Thomas Weisel Partners (which consent may be withheld in its sole discretion), it will not, during the period commencing on the date hereof and ending 180 days after the date of the final prospectus relating to the Public Offering (the "Prospectus"), (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock, or (2) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the Common Stock, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of Common Stock or such other securities, in cash or otherwise. In addition, the undersigned agrees that, without the prior written consent of Thomas Weisel Partners (which consent may be withheld in its sole discretion), it will not, during the period commencing on the date hereof and ending 180 days after the date of the Prospectus, make any demand for or exercise any right with respect to, the registration of any shares of Common Stock or any security convertible into or exercisable or exchangeable for Common Stock. With respect to the Public Offering, the undersigned waives any registration rights relating to registration under the

Securities Act of any Common Stock owned either of record or beneficially by the undersigned, including, without limitation, any rights to receive notice of the Public Offering and any rights under that certain Amended and Restated Securityholders' Agreement dated as of March 2, 1999 by and among the Company, Ascent Venture Partners, L.P. (as assignee of Pioneer Ventures Limited Partnership and Pioneer Capital Corp.), Ascent Venture Partners II, L.P. (formerly known as Pioneer Ventures Limited Partnership II), First New England Capital, L.P., Citizens Capital, Inc., Chane Graziano and David Green.

The foregoing restrictions are expressly agreed to preclude the undersigned from engaging in any hedging or other transaction which is designed to or reasonably expected to lead to or result in a sale or disposition of the Common Stock even if such Common Stock would be disposed of by someone other than the undersigned. Such prohibited hedging or other transactions would include without limitation any short sale or any purchase, sale or grant of any right (including without limitation any put option or put equivalent position or call option or call equivalent position) with respect to any of the Common Stock or with respect to any security that includes, relates to, or derives any significant part of its value from such Common Stock.

Notwithstanding the foregoing, the undersigned may transfer shares of Common Stock (i) as a BONA FIDE gift or gifts, provided that the donee or donees thereof agree to be bound by the restrictions set forth herein, (ii) to any trust for the direct or indirect benefit of the undersigned or the immediate family of the undersigned, provided that the trustee of the trust agrees to be bound by the restrictions set forth herein, and provided further that any such transfer shall not involve a disposition for value, (iii) to the Underwriters pursuant to the Underwriting Agreement, or (iv) in transactions relating to shares of Common Stock acquired by the undersigned in open market transactions after the completion of the Public Offering. For purposes of this Agreement, "immediate family" shall mean any relationship by blood, marriage or adoption, not more remote than first cousin. In addition, notwithstanding the foregoing, if the undersigned is a corporation, the corporation may transfer the capital stock of the Company to any wholly-owned subsidiary of such corporation; PROVIDED, HOWEVER, that in any such case, it shall be a condition to the transfer that the transferee execute an agreement stating that the transferee is receiving and holding such capital stock subject to the provisions of this Agreement and there shall be no further transfer of such capital stock except in accordance with this Agreement, and provided further that any such transfer shall not involve a disposition for value. In addition, notwithstanding anything contained herein to the contrary, at any time prior to the date on which the Registration Statement on Form S-1 filed with the Securities and Exchange Commission relating to the Public Offering is declared effective by the Securities and Exchange Commission, the undersigned may transfer shares of Common Stock; PROVIDED, HOWEVER, that in any such case, it shall be a condition to the transfer that (i) the transferee execute and deliver a lock-up agreement, in the form of the lock-up agreement executed by the transferor, and (ii) the transferor provide notice of such transfer to the Representatives of the Underwriters.

The undersigned understands that whether or not the Public Offering actually occurs depends on a number of factors, including stock market conditions. The Public Offering will only be made pursuant to an Underwriting Agreement, the terms of which are subject to negotiation among the Company and the Underwriters. Notwithstanding anything contained herein to the contrary, if the Public Offering is terminated or suspended by either the Underwriters or the Company, this lock-up agreement shall be of no further force or effect.

The undersigned agrees and consents to the entry of stop transfer instructions with the Company's transfer agent and registrar against the transfer of shares of Common Stock or securities convertible into or exchangeable or exercisable for Common Stock held by the undersigned except in compliance with the foregoing restrictions.

This agreement is irrevocable and will be binding on the undersigned and the respective successors, heirs, personal representatives, and assigns of the undersigned.

Very truly yours,

(Name)

(Address)

INDEPENDENT AUDITORS' CONSENT

The Board of Directors
Harvard Apparatus, Inc.:

We consent to the inclusion of our report dated October 19, 2000, except as to note 20 which is as of October 25, 2000, with respect to the consolidated balance sheets of Harvard Apparatus, Inc. and subsidiaries as of September 30, 2000, December 31, 1999 and 1998 and the related consolidated statements of operations, stockholders' equity (deficit) and comprehensive income (loss), and cash flows for the nine months ended September 30, 2000 and for each of the years in the three-year period ended December 31, 1999 which report appears in this Registration Statement, and to the reference to our firm under the heading "Experts" in this Registration Statement.

/s/ KPMG LLP

Boston, Massachusetts
December 5, 2000

EXHIBIT 23.3

CONSENT OF INDEPENDENT ACCOUNTANTS

We hereby consent to the use in this Registration Statement on Form S-1 of our reports dated February 26, 1998 (for the year ended December 31, 1997) and April 9, 1999 (for the year ended December 31, 1998), except for the US GAAP reconciliation as described in Note 24 which is at September 15, 2000, relating to the financial statements and financial statement schedules of Pharmacia & Upjohn (Cambridge) Limited, which appear in the Registration Statement. We also consent to the references to us under the heading "Experts" in such Registration Statement.

/s/ PricewaterhouseCoopers

PRICEWATERHOUSECOOPERS
Cambridge, England
December 5, 2000