UNITED STATES SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, DC 20549

FORM 10-Q

☒ **Quarterly report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**
For the quarterly period ended September 30, 2004 or

Transition report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
For the transition period from to

Commission file number 000-31923

HARVARD BIOSCIENCE, INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware	**(508) 893-8999**	**04-3306140**
(State or Other Jurisdiction of Incorporation or Organization)	(Registrant's telephone number, including area code)	(IRS Employer Identification No.)
	84 October Hill Road, Holliston, MA	**01746**
	(Address of Principal Executive Offices)	(Zip Code)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

o YES ☒ NO

Indicate by check mark whether the registrant is an accelerated filer (as defined in Exchange Act Rule 12b-2).

☒ YES o NO

APPLICABLE ONLY TO CORPORATE ISSUERS:

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

At November 1, 2004 there were 30,347,426 shares of Common Stock, par value $0.01 per share, outstanding.

HARVARD BIOSCIENCE, INC.

Form 10-Q
For the Quarter Ended September 30, 2004

INDEX

PART I. FINANCIAL INFORMATION

Item 1. Financial Statements.

HARVARD BIOSCIENCE, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(unaudited)
(in thousands, except share and per share amounts)

	September 30, 2004	December 31, 2003
Assets		
Current assets:		
Cash and cash equivalents	$ 11,593	$ 8,223
Accounts receivable, net of reserve for uncollectible accounts of $532 and $417 at September 30, 2004 and December 31, 2003, respectively	16,918	19,075
Inventories (note 7)	24,815	24,679
Deferred income tax asset	500	500
Other receivables and other current assets	3,438	3,301
Total current assets	57,264	55,778
Property, plant and equipment, net	6,709	6,746
Deferred income tax asset	352	400
Amortizable intangible assets, net	27,864	28,212
Goodwill and other indefinite lived intangible assets (notes 4 and 5)	41,477	36,341
Other assets	843	952
Total assets	$ 134,509	$ 128,429
Liabilities and Stockholders' Equity		
Current liabilities:		
Current installments of long-term debt	$ 21	$ 398
Accounts payable	5,032	6,457
Deferred revenue	2,412	2,080
Accrued income taxes payable	344	1,218
Accrued expenses	4,684	4,984
Other current liabilities	848	459
Total current liabilities	13,341	15,596
Long-term debt, less current installments	17,724	12,787
Deferred income tax liability	1,123	207
Other liabilities	971	961
Total liabilities	$ 33,159	$ 29,551
Commitments and contingencies (note 12)		
Stockholders' equity:		
Common stock, par value $.01 per share, 80,000,000 shares authorized; 35,004,208 and 34,793,469 shares issued and 30,343,424 and 30,132,685 shares outstanding at September 30, 2004 and December 31, 2003, respectively	$ 350	$ 348
Additional paid-in-capital	173,290	172,448
Accumulated deficit	(77,387)	(78,591)
Accumulated other comprehensive income	5,765	5,341
Treasury stock, 4,660,784 common shares, at cost	(668)	(668)
Total stockholders' equity	101,350	98,878
Total liabilities and stockholders' equity	$ 134,509	$ 128,429

See accompanying notes to unaudited consolidated financial statements.

HARVARD BIOSCIENCE, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF OPERATIONS
(unaudited)

(in thousands, except per share amounts)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2004	2003	2004	2003
Product revenues	$ 23,018	$ 20,902	$ 67,009	$ 62,227
Research revenues	205	206	840	707
Total revenues	23,223	21,108	67,849	62,934
Costs and expenses:				
Cost of product revenues (1)	11,822	10,685	34,588	31,308
General and administrative expense (1)	3,446	2,723	10,519	8,641
Sales and marketing expense (1)	3,835	3,815	12,421	11,320
Research and development expense (1)	1,898	1,615	5,315	4,701
Amortization of intangible assets (note 5)	544	578	2,556	1,931
Operating income	1,678	1,692	2,450	5,033
Other income (expense):				
Foreign currency gain (loss)	39	291	(129)	261
Interest expense	(199)	(74)	(577)	(198)
Interest income	28	12	134	110
Amortization of deferred financing costs	(27)	—	(80)	—
Other	4	20	(10)	(844)
Other income (expense), net	(155)	249	(662)	(671)
Income before income taxes	1,523	1,941	1,788	4,362
Income tax expense	566	955	584	1,855
Net income	$ 957	$ 986	$ 1,204	$ 2,507
Income per share (note 6):				
Basic	$ 0.03	$ 0.03	$ 0.04	$ 0.08
Diluted	$ 0.03	$ 0.03	$ 0.04	$ 0.08
Weighted average common shares:				
Basic	30,313	29,941	30,240	29,912
Diluted	30,831	30,948	31,187	30,513

(1) Includes stock compensation expense as follows:

Cost of product revenues	$ 4	$ 14	$ 63	$ 67
General and administrative expense	30	103	40	319
Sales and marketing expense	13	4	26	16
Research and development expense	4	—	5	—
Total	$ 51	$ 121	$ 134	$ 402

See accompanying notes to unaudited consolidated financial statements.

HARVARD BIOSCIENCE, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(unaudited)
(in thousands)

	Nine Months Ended September 30,	
	2004	2003
Cash flows from operating activities:		
Net income	$ 1,204	$ 2,507
Adjustments to reconcile net income to net cash provided by operating activities:		
Stock compensation expense	134	402
Depreciation	1,878	1,629
Amortization of catalog costs	105	278
Loss on sale of fixed assets	58	—
Amortization of intangible assets	2,556	1,931
Amortization of deferred financing costs	80	—
Deferred income taxes	47	(516)
Changes in operating assets and liabilities, net of effects of business acquisitions:		
(Increase) decrease in accounts receivable	2,634	(566)

(Increase) decrease in inventories	370	(1,553)
(Increase) decrease in other receivables and other current assets	(269)	138
Decrease in other assets	105	836
Decrease in trade accounts payable	(1,578)	(394)
Increase (decrease) in accrued income taxes payable	(872)	591
Increase (decrease) in accrued expenses and other current liabilities	711	(3,367)
Increase (decrease) in deferred revenue	284	(974)
Increase in other liabilities	5	203
Net cash provided by operating activities	7,452	1,145
Cash flows from investing activities:		
Additions to property, plant and equipment	(1,955)	(985)
Additions to catalog costs	(369)	(15)
Proceeds from sales of fixed assets	13	—
Acquisition of businesses, net of cash acquired	(6,974)	(14,681)
Net cash used in investing activities	(9,285)	(15,681)
Cash flows from financing activities:		
Repayment of notes receivable from officers	—	1,021
Proceeds from short-term debt	—	6,000
Net proceeds from long-term debt	6,950	—
Repayments of long-term debt	(2,399)	(685)
Net proceeds from issuance of common stock	708	104
Net cash provided by financing activities	5,259	6,440
Effect of exchange rate changes on cash	(56)	360
Increase (decrease) in cash and cash equivalents	3,370	(7,736)
Cash and cash equivalents at the beginning of period	8,223	15,313
Cash and cash equivalents at the end of period	$ 11,593	$ 7,577
Supplemental disclosures of cash flow information:		
Cash paid for interest	$ 545	$ 198
Cash paid for income taxes	$ 1,435	$ 1,711

See accompanying notes to unaudited consolidated financial statements.

HARVARD BIOSCIENCE, INC.

Notes to Unaudited Consolidated Financial Statements

1. Basis of Presentation and Summary of Significant Accounting Policies

Basis of Presentation

The unaudited consolidated financial statements of Harvard Bioscience, Inc. and its wholly-owned subsidiaries ("the Company") as of September 30, 2004 and for the three and nine months ended September 30, 2004 and 2003, has been prepared by the Company pursuant to the rules and regulations of the Securities and Exchange Commission ("SEC"). Certain information and footnote disclosures normally included in financial statements prepared in accordance with U.S. generally accepted accounting principles have been condensed or omitted pursuant to such rules and regulations. The December 31, 2003, consolidated balance sheet was derived from audited financial statements, but does not include all disclosures required by U.S. generally accepted accounting principles. However, the Company believes that the disclosures are adequate to make the information presented not misleading. These unaudited consolidated financial statements should be read in conjunction with the consolidated financial statements and the notes thereto included in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2003.

In the opinion of management, all adjustments, which include normal recurring adjustments, necessary to present a fair statement of financial position as of September 30, 2004, results of operations for the three and nine months ended September 30, 2004 and 2003, and cash flows for the nine months ended September 30, 2004 and 2003, as applicable, have been made. The results of operations for the three and nine months ended September 30, 2004 are not necessarily indicative of the operating results for the full fiscal year or any future periods.

Certain reclassifications to prior year balances have been made to conform to current year presentations.

Summary of Significant Accounting Policies

The accounting policies underlying the accompanying unaudited consolidated financial statements are those set forth in Note 2 to the consolidated financial statements included in the Company's Annual Report on Form 10-K for the year ended December 31, 2003, filed with the SEC.

2. Recently Issued Accounting Pronouncements

In December 2003, the Financial Accounting Standards Board ("FASB") issued FASB Interpretation No. 46 (revised December 2003) ("FIN 46R"), *Consolidation of Variable Interest Entities*, which addresses how a business enterprise should evaluate whether it has a controlling financial interest in an entity through means other than voting rights and accordingly should consolidate the entity. FIN 46R replaces FASB Interpretation No. 46, *Consolidation of*

Variable Interest Entities, which was issued in January 2003. The Company was required to adopt certain provisions of FIN 46R as of December 31, 2003 and the remaining provisions as of March 31, 2004. The adoption of this Interpretation did not have a material impact on the Company's consolidated results of operations or financial position.

In December 2003, Statement of Financial Accounting Standards ("SFAS") No. 132 (revised), *Employers' Disclosures about Pensions and Other Postretirement Benefits*, was issued. SFAS No. 132 (revised) prescribes employers' disclosures about pension plans and other postretirement benefit plans; it does not change the measurement or recognition of those plans. The Statement retains and revises the disclosure requirements contained in the original SFAS No. 132. It also requires additional disclosures about the assets, obligations, cash flows, and net periodic benefit cost of defined benefit pension plans and other postretirement benefit plans. The Statement generally is effective for fiscal years ending after December 15, 2003, however as all of the Company's pension plans covered by this Statement are outside of the United States the provisions of SFAS No. 132 are not applicable until 2004. The Company adopted the applicable interim disclosure requirements of SFAS No. 132 (revised) as of January 1, 2004. See Note 11 to the unaudited consolidated financial statements. The Company will be required to adopt the remaining disclosure requirements of this Statement as of December 31, 2004.

3. Stock Based Compensation

The Company has adopted the disclosure provisions of SFAS No. *148 Accounting for Stock-Based Compensation – Transition and Disclosure,* an amendment of SFAS No. 123 and continues to apply Accounting Principles Board Opinion No. 25 and related interpretations in accounting for its stock plans. If the Company had elected to recognize compensation cost for all of the plans based upon fair value at the grant dates for awards under those plans, consistent with the method prescribed by SFAS No. 123, net income and earnings per share would have been changed to the pro forma amounts indicated below:

	Three Months Ended September 30,		Nine Months Ended September 30,	
(in thousands, except per share data)	**2004**	**2003**	**2004**	**2003**
Net income, as reported	$ 957	$ 986	$ 1,204	$ 2,507
Add: stock-based employee compensation expense included in reported net income, net of tax	51	120	132	394
Deduct: total stock-based employee compensation expense determined under fair-value based method for all awards, net of tax	(1,429)	(1,013)	(3,623)	(2,776)
Pro forma net income (loss)	$ (421)	$ 93	$ (2,287)	$ 125
Net income (loss) per share				
Basic – as reported	$ 0.03	$ 0.03	$ 0.04	$ 0.08
Basic - pro forma	$ (0.02)	$ 0.00	$ (0.08)	$ 0.00
Diluted - as reported	$ 0.03	$ 0.03	$ 0.04	$ 0.08
Diluted – pro forma	$ (0.02)	$ 0.00	$ (0.08)	$ 0.00

The fair value of each option grant for the Company's stock option plans is estimated on the date of the grant using the Black-Scholes valuation model. The Black-Scholes option valuation model was developed for use in estimating the fair value of traded options that have no vesting restrictions and are fully transferable. In addition, option valuation models require the input of highly subjective assumptions, including the expected stock price volatility. Because the Company's stock options have characteristics significantly different from traded options, and because changes in the subjective input assumptions can materially affect the fair value estimate, in the opinion of management, the existing models do not necessarily provide a reliable single value of the Company's stock options and may not be representative of the future effects on reported net income or the future stock price of the Company.

4. Acquisitions

KD Scientific

On March 3, 2004, the Company acquired all issued and outstanding shares of KD Scientific, Inc. ("KDS") for approximately $6.8 million (including acquisition costs of approximately $0.2 million). KDS designs, manufactures and sells a range of quality fluidics equipment used in research laboratories worldwide. The acquisition compliments our core fluidics products with the addition of the recognized KD Scientific brand and complementary technology. Currently, KDS sells primarily through major scientific products distributors. Goodwill recognized in connection with the acquisition, represents excess of purchase price over net tangible and intangible assets assumed and can be attributed to, among other factors, expected future strategic synergies and the potential for new customers. The acquisition was funded by proceeds from the Company's $20 million credit facility with Brown Brothers Harriman. The results of operations of KD Scientific have been included in the consolidated financial statements of the Company from the date of acquisition.

During the third quarter of 2004, with the assistance of an external valuation company, management finalized the purchase price allocation for the KDS acquisition. As a result of the final purchase price allocation, as compared to the preliminary allocation, the fair value of the customer relationships decreased by approximately $1.7 million and the recognition of a deferred tax liability (approximately $0.9 million) offset by increases in the fair value of existing technology of $0.2 million and goodwill and other indefinite lived intangibles (trade name) increased by approximately $2.4 million. The change is the result of adjustments to the original purchase price allocation recorded as of March 31, 2004, which was based on management's preliminary estimates of the fair market value assigned to both tangible and intangible assets. This final purchase price allocation had an impact of decreasing amortization expense during the third quarter of 2004 by approximately $0.3 million.

The final aggregate purchase price of this acquisition was allocated to tangible and intangible assets acquired based on their fair values as follows:

(unaudited, in thousands)	**September 30, 2004 KD Scientific**

Tangible assets	$	456
Liabilities assumed		(999)
Net tangible liabilities assumed		(543)
Goodwill and intangible assets:		
Existing technology		500
Distribution agreements / customer relations		3,100
Goodwill		2,875
Other indefinite lived intangibles (trade name)		900
Total goodwill and intangible assets		7,375
Cash paid for acquisition	$	6,832

The following unaudited pro forma results of operations give effect to the acquisition of KD Scientific, Inc. as if it had occurred as of January 1, 2003. Such pro forma information reflects certain adjustments including amortization of intangible assets and income tax effect. The pro forma information does not necessarily reflect the results of operations that would have occurred had the acquisitions taken place as described and is not necessarily indicative of results that may be obtained in the future.

	Three Months Ended September 30,		Nine Months Ended September 30,	
(unaudited, in thousands, except per share data)	2004	2003	2004	2003
Pro forma revenues	$ 23,223	$ 21,926	$ 68,250	$ 65,441
Pro forma net income	$ 957	$ 1,127	$ 1,222	$ 2,953
Pro forma net income per share:				
Basic	$ 0.03	$ 0.04	$ 0.04	$ 0.10
Diluted	$ 0.03	$ 0.04	$ 0.04	$ 0.10
Pro forma weighted average common shares:				
Basic	30,313	29,941	30,240	29,912
Diluted	30,831	30,948	31,187	30,513

5. *Goodwill and Other Intangible Assets*

On January 1, 2002, the Company fully adopted SFAS No. 142, *Goodwill and Other Intangible Assets*. As a result of the adoption, goodwill and other indefinite-lived intangible assets are no longer being amortized, but are subject to annual impairment reviews, or more frequently, if events or circumstances indicate there may be an impairment.

Intangible assets consist of the following:

(unaudited, in thousands)	September 30, 2004 Gross Carrying Value	December 31, 2003 Gross Carrying Value	Weighted Average Life (a)
Amortizable intangible assets:			
Existing technology	$ 29,063	$ 30,981	8.2 years
Tradename	1,705	1,704	11.0 years
Distribution agreement/customer relationships	4,753	621	8.5 years
Patents	9	9	11.6 years
Accumulated amortization	(7,666)	(5,103)	
Total amortizable intangible assets, net	$ 27,864	$ 28,212	
Unamortizable intangible assets:			
Goodwill and other indefinite lived intangible assets	$ 41,477	$ 36,341	
Total intangible assets, net	$ 69,341	$ 64,553	

(a) Weighted average life is as of September 30, 2004

The changes in the carrying amount of goodwill for the nine months ended September 30, 2004 are as follows:

Balance at December 31, 2003	$	36,341
Goodwill acquired during the year		3,775
Adjustment to purchase price of prior year acquisitions		1,237
Effect of change in foreign currencies		124
Balance at September 30, 2004	$	41,477

Final Purchase Price Allocations

During the third quarter of 2004, with the assistance of external valuation companies, management finalized the purchase price allocations for the BioRobotics, Hoefer and KD Scientific acquisitions.

BioRobotics

As a result of the final purchase price allocation, as compared to the preliminary allocation, the fair value of existing technology decreased by approximately $0.4 million and increased goodwill increased by approximately $0.1 million. Additionally, the final purchase price was reduced by approximately $0.3 million, which was the net effect of a reduction in the amounts owed to the seller partially offset by an increase in acquisition costs. The change is the result of adjustments to the original purchase price allocation recorded as of December 31, 2003, which was based on management's preliminary estimates of the fair market value assigned to both tangible and intangible assets. This final purchase price allocation had an impact of decreasing amortization expense during the third quarter of 2004 by approximately $0.1 million. The final aggregate purchase price of this acquisition was allocated to tangible and intangible assets acquired based on their fair values as follows:

(unaudited, in thousands)		September 30, 2004 BioRobotics
Tangible assets	$	2,505
Liabilities assumed		(701)
Net assets assumed		1,804
Goodwill and intangible assets:		
Existing technology		1,082
Goodwill		436
Total goodwill and intangible assets		1,518
Cash paid for acquisition	$	3,322

Hoefer

As a result of the final purchase price allocation, as compared to the preliminary allocation, the fair value of the distribution agreement increased by approximately $1.0 million, the fair value of goodwill increased by approximately $1.2 million offset by a decrease of $2.2 million in the fair market value of existing technology. The change is the result of adjustments to the original purchase price allocation recorded as of December 31, 2003, which was based on management's preliminary estimates of the fair market value assigned to both tangible and intangible assets. This final purchase price allocation had an impact of decreasing amortization expense during the third quarter of 2004 by approximately $0.1 million. The final aggregate purchase price of this acquisition was allocated to tangible and intangible assets acquired based on their fair values as follows:

(unaudited, in thousands)		September 30, 2004 Hoefer
Tangible assets	$	2,418
Liabilities assumed		(136)
Net assets assumed		2,282
Goodwill and intangible assets:		
Existing technology		314
Distribution agreements / customer relationships		1,653
Goodwill		1,136
Total goodwill and intangible assets		3,103
Cash paid for acquisition	$	5,385

KD Scientific

As a result of the final purchase price allocation, as compared to the preliminary allocation the fair value of the customer relationships decreased by approximately $1.7 million and the recognition of a deferred tax liability (approximately $0.9 million) offset by increases in the fair value of existing technology of $0.2 million and goodwill and other indefinite lived intangibles (trade name) increased by approximately $2.4 million. The change is the result of adjustments to the original purchase price allocation recorded as of March 31, 2004, which was based on management's preliminary estimates of the fair market value assigned to both tangible and intangible assets. This final purchase price allocation had an impact of decreasing amortization expense during the third quarter of 2004 by approximately $0.3 million. The final aggregate purchase price of this acquisition, was allocated to tangible and intangible assets acquired based on their fair values as follows:

(unaudited, in thousands)		September 30, 2004 KD Scientific
Tangible assets	$	456
Liabilities assumed		(999)
Net tangible liabilities assumed		(543)
Goodwill and intangible assets:		
Existing technology		500
Distribution agreements / customer relations		3,100
Goodwill		2,875
Other indefinite lived intangibles (trade name)		900
Total goodwill and intangible assets		7,375
Cash paid for acquisition	$	6,832

Intangible asset amortization expense for the three and nine months ended September 30, 2004 was approximately $0.5 million and $2.5 million, respectively, compared to $0.6 million and $1.9 million, respectively, for the same periods in 2003. Amortization expense of existing amortizable intangible assets is estimated to be $3.5 million for the year ending December 31, 2004, $3.6 million for the years ended December 31, 2005, 2006, and 2007 and $3.5 million for the year ended December 31, 2008.

6. Income Per Share

Basic income per share is based upon net income divided by the number of weighted average common shares outstanding during the period. The calculation of diluted net income per share assumes conversion of stock options into common stock using the treasury method. The weighted average number of shares used to compute basic and diluted earnings per share consists of the following:

(unaudited, in thousands)	Three Months Ended September 30, 2004	Three Months Ended September 30, 2003	Nine Months Ended September 30, 2004	Nine Months Ended September 30, 2003
Basic	30,313	29,941	30,240	29,912
Effect of assumed conversion of employee stock options	518	1,007	947	601
Diluted	30,831	30,948	31,187	30,513

Excluded from the shares used in calculating the diluted earnings per common share in the above table are options to purchase approximately 2.3 million and 1.1 million shares of common stock for the three months ended September 30, 2004 and 2003, and approximately 2.1 million and 1.1 million shares of common stock, for the nine months ended September 30, 2004 and 2003, respectively, as their effects would have been anti-dilutive.

7. Inventories

Inventories consist of the following:

(unaudited, in thousands)	September 30, 2004	December 31, 2003
Finished goods	$ 8,129	$ 8,160
Work in process	3,494	4,327
Raw materials	13,192	12,192
	$ 24,815	$ 24,679

8. Warranty

Warranties are estimated and accrued for at the time sales are recorded. A rollforward of product warranties is as follows:

(unaudited, in thousands)	Beginning Balance	Payments and Other Changes	Additions(a)	Ending Balance
Year ended December 31, 2003	$ 658	(462)	750	$ 946
Nine months ended September 30, 2004	$ 946	(508)	331	$ 769

(a) Includes additions of acquired companies

9. Restructuring

During the first nine months of 2004, the Company recorded restructuring charges of $0.6 million related to restructuring activities at Genomic Solutions (approximately $0.5 million) and Biochrom (approximately $0.1 million), due to the closure of facilities and realignment of our business strategy. These restructuring charges were classified as a component of general and administrative expenses. A rollforward of the restructuring activity is as follows:

	Severance (a)	Facility (b)	Other (c)	Total
December 31, 2003 balance	$ —	$ —	$ —	$ —
2004 restructuring charges	462	45	89	596
2004 cash payments	(329)	(45)	(69)	(443)
2004 non-cash charges	(67)	—	(11)	(78)
September 30, 2004 balance	$ 66	$ —	$ 9	$ 75

(a) Amount represents severance and termination costs for 40 terminated employees .
(b) Amount represents lease payments and other facility closure costs on exited operations.
(c) Amount represents legal costs and professional fees associated with a facility closure.

10. Comprehensive Income

Accumulated other comprehensive income, a component of stockholders' equity, as of September 30, 2004 and December 31, 2003, consists of cumulative foreign currency translation adjustments of $6.2 million and $5.8 million, respectively, and a minimum additional pension liability of $0.5 million and $0.5 million, respectively. The components of total comprehensive income were as follows:

(unaudited, in thousands)	Three Months Ended September 30, 2004	Three Months Ended September 30, 2003	Nine Months Ended September 30, 2004	Nine Months Ended September 30, 2003
Net income	$ 957	$ 986	$ 1,204	$ 2,507
Other comprehensive income (loss)	(18)	60	424	1,323
Comprehensive income	$ 939	$ 1,046	$ 1,628	$ 3,830

Other comprehensive income (loss) for the three and nine months ended September 30, 2004 and 2003 consists of foreign currency translation adjustments.

11. Employee Benefit Plans

Certain of the Company's United Kingdom subsidiaries, Harvard Apparatus Limited and Biochrom Limited, maintain contributory, defined benefit or defined contribution pension plans for substantially all of their employees. The components of the Company's defined benefit pension expense were as follows:

(unaudited, in thousands)	Three Months Ended September 30, 2004	Three Months Ended September 30, 2003	Nine Months Ended September 30, 2004	Nine Months Ended September 30, 2003
Components of net periodic benefit cost:				
Service cost	$ 99	$ 85	$ 298	$ 257
Interest cost	153	123	462	369
Expected return on plan assets	(167)	(136)	(503)	(409)
Net amortization loss	31	35	93	105
Net periodic benefit cost	$ 116	$ 107	$ 350	$ 322

For the three and nine months ended September 30, 2004, the Company has contributed approximately $111,000 and $351,000, respectively, to the defined benefit pension plans.

12. Legal Proceedings

On February 4, 2002, Paul D. Grindle, the former owner of Harvard Apparatus, Inc., initiated an arbitration proceeding against us and certain directors before JAMS in Boston, Massachusetts. Mr. Grindle's claims arise out of post-closing purchase price adjustments related to our purchase of the assets and business of Harvard Apparatus by virtue of an Asset Purchase Agreement dated March 15, 1996 and certain related agreements. In the arbitration demand, Mr. Grindle sought the return of 1,563,851 shares of common stock in Harvard Bioscience, or the disgorgement of the profits of our sale of the stock, as well as compensatory damages and multiple damages and attorney's fees under Mass. Gen. Laws, chapter 93A. In a demand letter that was attached to the arbitration demand, Mr. Grindle asserted losses in the amount of $15 million, representing the value of the 1,563,851 shares of Harvard Bioscience's common stock as of January 2, 2002. On October 30, 2002, we received a decision from the arbitrator that we have prevailed on all claims asserted against us and certain of our directors in the arbitration action. Specifically, we received a written decision from the arbitrator granting our motion for summary disposition with respect to all claims brought against all parties in the action. The Company filed a complaint in the Massachusetts Superior Court seeking to confirm the arbitrator's decision. Mr. Grindle filed a complaint in the Massachusetts Superior Court seeking to vacate the arbitrator's decision. These two matters were consolidated. On or about July 30, 2003, the Massachusetts Superior Court granted our motion to confirm the arbitrator's decision and to deny Mr. Grindle's motion to vacate. Mr. Grindle filed a notice of appeal with the Massachusetts Appeals Court. Both Mr. Grindle and the Company have filed briefs with the Massachusetts Appeals Court. The matter is pending. Mr. Grindle also filed an application for direct appellate review with the Massachusetts Supreme Judicial Court, which was denied.

In addition, from time to time, we may be involved in various claims and legal proceedings arising in the ordinary course of business. Except as disclosed above, we are not currently a party to any such claims or proceedings, which, if decided adversely against us, would either individually or in the aggregate have material adverse effect on our business, financial condition or results of operations.

In accordance with SFAS No. 5, "Accounting for Contingencies," the Company makes a provision for a liability when it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimated. We review these provisions at least quarterly and adjust these provisions to reflect the impacts of negotiations, settlements, rulings, advice of legal counsel, and any other information and events pertaining to a particular case. We do not reduce legal or contractual liabilities for possible recoveries from insurance companies.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Forward Looking Statements

This Quarterly Report on Form 10-Q contains statements that are not statements of historical fact and are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. The forward-looking statements are principally, but not exclusively, contained in "Item 2: Management's Discussion and Analysis of Financial Condition and Results of Operations." These statements involve known and unknown risks, uncertainties and other factors that 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, statements about our expected research and development spending, the impact of acquisitions on future earnings, the effect of our technology on the drug development process, our intention to strengthen our market position, management's confidence or expectations, our business strategy, our positioning for revenue and other growth, our ability to successfully implement an action plan for our genomics, proteomics and high throughput screening product lines and achieve the expected return to profitability for these product lines, our ability to reduce the risk of being dependent on a single technology, our ability to avoid competition with major instrument companies, our acquisition strategy (including our ability to accelerate the growth of acquired products through our

established brands and distribution channels, our ability to raise capital or borrow funds to consummate acquisitions and the availability of attractive acquisition candidates), our plans and intentions regarding the distribution of our catalog and supplements to our catalog, our expectations regarding future costs of product revenues, the market demand and opportunity for our products, our beliefs regarding our position in comparison to our competitors, our estimates regarding our capital requirements, the timing of future product introductions, or the ability of our patent strategy to protect our current and future products, our expectations in connection with current litigation (including inferences about the finality of the arbitrator's decision in the Grindle matter and potential appeal of or other challenge to that decision), and our plans, objectives, expectations and intentions 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 detail under the heading "Cautionary Factors" beginning on page 26 of this Quarterly Report on Form 10-Q. You should carefully review all of these factors, as well as other risks described in our public filings, and you should be aware that there may be other factors, including factors of which we are not currently aware, that could cause these differences. Also, these forward-looking statements represent our estimates and assumptions only as of the date of this report. 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.

Overview

From 1997 to 2003 our revenues grew at an annual compounded growth rate of approximately 40%. This was achieved by implementing our three-part growth strategy of new product development, strategic partnerships and acquisitions. This strategy has provided us with strong organic growth in good economic times, and in tough economic times, such as we experienced in 2002 and 2003 it has provided us with strong acquisition growth. For 2004, we expect revenue growth without further acquisitions to be below our historic levels. Our revenue grew approximately 8% for the first nine months of 2004 compared to the same period in 2003. During 2003 and for the nine months ended September 30, 2004, although we continued with new product development and strategic partnerships which did contribute to revenues, our revenue growth was primarily attributable to acquisitions we made in 2002, 2003 and the first nine months of 2004.

With the acquisitions of Union Biometrica in May 2001, Genomic Solutions in October 2002, GeneMachines in March 2003 and BioRobotics in September 2003, an increasing portion of our revenues is the result of sales of relatively high-priced products, considered to be capital equipment. Approximately 40% of our revenues for the year ended December 31, 2003 and 30% and 32%, respectively, of our revenues for the three and nine months ended September 30, 2004 was derived from capital equipment products. The capital equipment market has a tendency to be volatile and is much more seasonal compared to our traditional catalog business and as such, we believe we have experienced, and we believe we will continue to experience, substantial fluctuations in our quarterly revenues. Reduced demand, delays in purchase orders, receipt, manufacture or shipment of products or receivables collection of these relatively high-priced products have lead to substantial variability in our revenues, operating results and working capital requirements from quarter to quarter.

Additionally, the cyclical buying pattern of the capital equipment purchasing market could mask or exaggerate the economic trends underlying the market for our capital equipment product lines. Specifically, a decline in any quarter that is typically a quarter that we would expect to contribute less than one-quarter of projected revenue for the year, could be misinterpreted if the decline is instead attributable to a negative trend in the market and/or in the demand for our products as evidenced in our results for the first, second and third quarters of 2004. Conversely, an increase in capital equipment purchasing in any quarter that is typically a quarter which we would expect to contribute less than one-quarter of projected revenue for the year, could be misinterpreted as a favorable trend in the market and/or in the demand for our products.

In general, we believe that we have seen, particularly in the last half of 2003 and in the first nine months of 2004, a strengthening in the economy. However, we do believe that the economy is still uncertain, with the outlook for the proteomics market looking particularly uncertain. While we are optimistic that we can return to solid organic growth in addition to growth from acquisitions, we are unable to determine if the growth in the areas we have seen are a trend that is likely to continue, or are even a trend. Additionally, we expect that the 2004 revenues we will achieve in the genomics, proteomics and high-throughput screening product lines will be lower than that achieved in 2003, not just due to an uncertain economy, but also we believe due to the lack of focus devoted to these product lines in the first half of 2004. We are continuing to monitor both the market, as well as our internal resources, as we pursue our goal of maintaining and/or improving the operating metrics of the Company, and accordingly during the second quarter of 2004, we implemented an action plan, including a restructuring plan at our Genomic Solutions subsidiary, which we believe will enable us to bring our genomics, proteomics and high-throughput screening product lines back in line with our goal of solid operating metrics and profitability across all product lines and operations. The costs associated with this action plan had an adverse impact on third quarter and year to date 2004 earnings results.

Generally, management evaluates the financial performance of its operations before the effects of stock compensation expense and before the effects of purchase accounting related to our acquisitions. Our goal is to develop and sell products that profitably accelerate drug discovery and as such we monitor the operating metrics of the Company and when appropriate effect organizational changes to leverage infrastructure and distribution channels. These changes may be effected as a result of various events, including acquisitions, weakened economy, soft market conditions and personnel changes. In the table below, we provide an overview of the selected operating metrics commonly reviewed by our management.

During 2003 we entered into a $20 million credit facility with Brown Brothers Harriman & Co., under which we have currently drawn down approximately $17.7 million. We believe that the financial covenants contained in the credit facility involving income, debt coverage and cash flow, as well as minimum working capital requirements are covenants that we will continue to be in compliance with under current operating plans. The credit facility also contains limitations on our ability to incur additional indebtedness. Additionally, the facility requires creditor approval for acquisitions funded with cash in excess of $6 million and for those which may be funded with equity in excess of $10 million. We do not believe that these requirements will be a significant constraint on our operations or on the acquisition portion of our growth strategy.

Historically, we have funded acquisitions with debt, capital raised by issuing equity and cash flow from operations. In order to continue the acquisition portion of our three part growth strategy we will need to raise more capital, either by incurring additional debt, issuing equity or a combination. Currently, we

are prohibited from accessing the public equity markets due to an outstanding amendment to a Current Report on Form 8-K in connection with a previous acquisition. In addition, we are not currently eligible to use Form S-3 to effect a registration of our equity as a result of this delinquent filing. We are in the process of seeking to complete this outstanding filing and anticipate that we will become current with our required filings under Form 8-K. Once we become current with our SEC filings, we will immediately be eligible to register debt or equity and will be eligible to use Form S-3 twelve months after the initial due date of the outstanding Form 8-K amendment. However, until this matter is resolved, our ability to raise capital may be limited to private equity transactions and/or additional borrowing and may result in entering into an agreement on less than favorable terms.

Selected Operating Metrics
(in thousands, unaudited)

	Three Months Ended September 30,				Nine Months Ended September 30,			
	2004	% of Revenue	2003	% of Revenue	2004	% of Revenue	2003	% of Revenue
Total revenues	$ 23,223		$ 21,108		$ 67,849		$ 62,934	
Cost of product revenues	11,822	50.9%	10,685	50.6%	34,588	51.0%	31,308	49.7%
Sales and marketing expense	3,835	16.5%	3,815	18.1%	12,421	18.3%	11,320	18.0%
Research and development expense	1,898	8.2%	1,615	7.7%	5,315	7.8%	4,701	7.5%
General and administrative expense	3,446	14.8%	2,723	12.9%	10,519	15.5%	8,641	13.7%

Revenues. We generate revenues by selling instruments, devices and consumables through our catalog, our direct sales force, our distributors and our website.

For products primarily priced under $10,000, every one 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. Over the life of the catalog, distribution will also be made periodically to potential and existing customers through direct mail and trade shows and in response to e-mail and telephone inquiries. 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 end user customers are 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. We launched our latest comprehensive catalog in March 2004, with approximately 1,100 pages and approximately 70,000 copies printed. Revenues direct to end users, derived through our catalog and the electronic version of our catalog on our website, represented approximately 25% of our revenues for the year ended December 31, 2003 and approximately 21% and 22% for the three and nine months ended September 30, 2004, respectively. We do not currently have the capability to accept purchase orders through our website.

Products sold under brand names of distributors including GE Healthcare (formerly Amersham Biosciences), are typically priced in the range of $5,000 -$15,000. They are mainly scientific instruments like spectrophotometers and plate readers that analyze light to detect and quantify a very wide range of molecular and cellular processes or apparatus like gel electrophoresis units. We also use distributors for both our catalog products and our higher priced products, for sales in locations where we do not have subsidiaries or where we have distributors in place for acquired businesses. For the year ended December 31, 2003 approximately 45% of our revenues were derived from sales to distributors. For the three and nine months ended September 30, 2004, approximately 54% and 53%, respectively, of our revenues were derived from sales to distributors.

For our higher priced products, which are typically priced over $25,000 and deemed capital equipment, we have direct sales organizations which consist of sales and marketing personnel, customer support, technical support and field application service support. These organizations have been structured to attend to the specific needs associated with the promotion and support of higher priced capital equipment customers. The combined expertise of both our sales and technical support staff provide a balanced skill set when promoting the relevant products at seminars, on-site demonstrations and exhibitions which are done routinely. The expertise of our field service personnel provides complete post-sale customer support for instrument specific service, repair and maintenance, and applications support. For the year ended December 31, 2003, approximately 30% of our revenues were derived from sales by our direct sales force. For both the three and nine months ended September 30, 2004, approximately 25% of our revenues were derived from sales by our direct sales force.

For the year ended December 31, 2003, approximately 91% of our revenues were derived from products we manufacture or from collaboration and research grant projects. The remaining 9% of our revenues for the year ended December 31, 2003 were derived from complementary products we distribute in order to provide the researcher with a single source for all equipment needed to conduct a particular experiment. For the three and nine months ended September 30, 2004, approximately 92% of our revenues were derived from products we manufacture or from collaboration and research grant projects. The remaining 8% of our revenues for the three and nine months ended September 30, 2004, were derived from complementary products we distribute. For the year ended December 31, 2003 and the three and nine months ended September 30, 2004, approximately 50%, 47% and 46%, respectively, of our revenues were derived from sales made by our non-U.S. operations. A large portion of our international sales during this period consisted of sales to GE Healthcare (formerly Amersham Biosciences), the distributor for our spectrophotometers, plate readers and 1-D gel electrophoresis products. GE Healthcare distributes these products to customers around the world, including to many customers in the United States, from its distribution center in Upsalla, Sweden. As a result, we believe our international sales would have been a lower percentage of our revenues if we had shipped our products directly to our end users.

Cost of product revenues. Cost of product revenues includes material, labor and manufacturing overhead costs, obsolescence charges, packaging costs, warranty costs, shipping costs and royalties. Our costs of product revenues 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 higher cost of goods sold because the profit is effectively shared with the original manufacturer. We anticipate that our manufactured products will continue to have a lower cost of goods sold as a percentage of revenues as compared with the cost of non-manufactured products for the foreseeable future. Additionally our cost of product revenues as a percent of product revenues will vary based on mix of direct end user sales and distributor sales.

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 restructuring costs, facility costs, professional fees for legal and accounting services, investor relations, insurances 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 travel, trade shows, demonstration equipment, public relations and marketing materials, consisting

primarily of the printing and distribution of our approximately 1,100 page catalog, supplements and various other specialty catalogs, and the maintenance of our websites. We may from time to time expand our marketing efforts by employing additional technical marketing specialists in an effort to increase sales of selected categories of products in our catalog. We may also from time to time expand our direct sales organizations in an effort to increase and/or support sales of our higher priced capital equipment instruments or to concentrate on key accounts or promote certain product lines.

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 and to support collaboration agreements. Other research and development expense includes fees for 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 to make these investments in order to realize the potential of new technologies that we develop, license or acquire.

Stock compensation expense. Stock compensation expense 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 grant date for those options considered fixed awards. Stock compensation is amortized as a charge to operations using an accelerated vesting method in accordance with FASB Interpretation No. 28 *"Accounting for Stock Appreciation Rights and Other Variable Stock Option or Award Plans,"* which results in decreasing compensation expense from the date of the stock option grant until the vesting dates.

Results of Operations

Three months ended September 30, 2004 compared to three months ended September 30, 2003:

Revenues. Revenues increased $2.1 million or 10%, to $23.2 million in the third quarter of 2004 from $21.1 million in the third quarter of 2003. The increase in revenues for the third quarter of 2004 was primarily due to the acquisitions of Hoefer and KD Scientific (approximately $3.3 million) and a positive impact from sales denominated in foreign currencies (approximately $1.0 million) offset in part by a decrease in sales at Genomic Solutions (approximately $2.0 million). The favorable foreign exchange effect for the most recent quarter is due primarily to the strengthening of the British pound sterling and the Euro against the U.S. dollar.

Cost of product revenues. Cost of product revenues increased $1.1 million or 11%, to $11.8 million in the third quarter of 2004 from $10.7 million in the third quarter of 2003. The increase in the cost of product revenues was primarily due to the factors which contributed to the growth in revenues. As a percentage of total revenues, cost of product revenues was 51% for both the third quarters of 2004 and 2003. For the third quarter of 2004, approximately $0.2 million of the increase in cost of product for both revenues was related to fair value adjustments to inventory which were based on final purchase price allocations completed during the quarter for our acquisitions of BioRobotics, Hoefer and KD Scientific. For the third quarter of 2003, approximately $0.1 million of the cost of product revenues was related to fair value adjustments of inventory and backlog acquired from Genomic Solutions, BTX, GeneMachines and BioRobotics for products which were sold in the third quarter of 2003.

General and administrative expense. General and administrative expense increased $0.7 million, or 27%, to $3.4 million in the third quarter of 2004 compared to $2.7 million for the same period in 2003. The increase is primarily attributable to additional costs for Sarbanes-Oxley compliance (approximately $0.3 million) and acquisitions made since the third quarter of 2003 (approximately $0.3 million).

Sales and marketing expense. Sales and marketing expense was $3.8 million for the quarter ended September 30, 2004 relatively unchanged from the same period in 2003. The unchanged marketing and selling expense was the net effect of increased marketing and selling expense from the acquisitions made since the third quarter of 2003 (approximately $0.2 million) partially offset by marketing and selling expense reductions at Genomic Solutions due to the closing of the Japanese sales office in early 2004 (approximately $0.3 million).

*Research and development expense***.** Research and development spending, which includes expenses related to research revenues, increased $0.3 million to $1.9 million in the third quarter of 2004 compared to $1.6 million in the third quarter of 2003. The increase in research and development expenses was primarily due to the acquisition of Hoefer (approximately $0.2 million).

Stock compensation expense. In the third quarter of 2004 we recorded approximately $51,000 of stock compensation expense compared to $121,000 for the third quarter of 2003. For the third quarter of 2004, this expense is primarily related to options granted to certain employees of Genomic Solutions whose vesting was accelerated pursuant to separation agreements entered into as part of the restructuring of operations at Genomic Solutions and to options granted prior to our initial public offering. For the third quarter of 2003, this expense is related to options granted prior to our initial public offering and to options issued in exchange for the outstanding options of Union Biometrica in connection with the acquisition of Union Biometrica. Stock compensation expense has decreased because the Company uses an accelerated vesting method in accordance with FASB Interpretation No. 28 *"Accounting for Stock Appreciation Rights and Other Variable Stock Option or Award Plans,"* which results in decreasing compensation expense from the date of the stock option grant until the vesting dates. During the third quarter of 2004, we recognized the remaining stock compensation expense on the options granted prior to our initial public offering.

Amortization of intangible assets. Amortization of intangibles was $0.5 million in the third quarter of 2004 compared to $0.6 million for the same period in 2003. The decrease is related to adjustments to amortization expense based on the final purchase price allocations completed during the quarter for our recent acquisitions of BioRobotics, Hoefer and KD Scientific of approximately $0.5 million offset by an increase in amortization expense for these same acquisitions which all occurred since the third quarter of 2003.

Other income (expense), net. Other expense, net, for the third quarter of 2004 of $155,000 included approximately $171,000 net interest expense compared to net interest expense of $62,000 for the same period in 2003. The increase in net interest expense is due to cash and interest-bearing debt being increasingly used to fund acquisitions since 2003. Other expense, net, for the third quarter of 2004 also included a $39,000 foreign exchange gain compared to a $291,000 gain for the same period last year. These exchange gains are primarily the result of currency fluctuations on net payables and receivables between our subsidiaries.

Income taxes. The Company's effective income tax rates were 37.0% for the third quarter of 2004 and 49.2% for the third quarter of 2003. The decrease in the effective income tax rate is principally due to the Company incurring a lesser amount of nondeductible expenses in the United States and recording greater operating losses in jurisdictions that have greater effective income tax rates, principally the United States, and earning operating income in foreign jurisdictions with lower effective income tax rates.

Nine months ended September 30, 2004 compared to nine months ended September 30, 2003:

Revenues. Revenues increased $4.9 million, or 8%, to $67.8 million for the nine months ended September 30, 2004 from $62.9 million in the same period of 2003. The increase in revenues was primarily due to the acquisitions of Hoefer and KD Scientific (approximately $8.9 million) and a positive impact from sales denominated in foreign currencies (approximately $3.1 million) a majority of which was at Biochrom offset in part by a decrease in sales at Genomic Solutions (approximately $5.0 million) and sales at Biochrom (approximately $2.0 million) primarily due to decreased sales to GE Healthcare. The favorable foreign exchange effect for the nine months ending September 30, 2004 is due primarily to the strengthening of the British pound sterling and the Euro against the U.S. dollar.

Cost of product revenues. Cost of product revenues increased $3.3 million or 11%, to $34.6 million for the nine months ended September 30, 2004 from $31.3 million for the same period in 2003. The increase in the cost of product revenues was primarily due to the factors which contributed to the growth in revenues. As a percentage of product revenues, cost of product revenues for the nine months ended September 30, 2004 was 51% compared to 50% for the same period in 2003. For the nine months ended September 30, 2004, approximately $0.6 million of the cost of product revenues was related to fair value adjustments of inventory and backlog acquired from BioRobotics, Hoefer and KD Scientific for products which were sold in the nine months ended September 30, 2004. For the nine months ended September 30, 2003, approximately $0.7 million of the cost of product revenues was related to fair value adjustments of inventory and backlog acquired from Genomic Solutions, BTX and GeneMachines for products which were sold in the nine months ended September 30, 2003. The decrease in gross margin in the first nine months of 2004 compared to the same period in 2003 is largely due to a gross margin drop at Genomic Solutions in the nine months ended September 30, 2004. This gross margin percent drop was due to lower revenues and production volumes.

General and administrative expense. General and administrative expense increased $1.9 million, or 22%, to $10.5 million in the nine months ended September 30, 2004 compared to $8.6 million for the same period in 2003. Approximately $0.6 million of the increase is due to restructuring costs at our Biochrom, Genomic Solutions and Warner Instruments subsidiaries (see "Restructuring" below) and the remaining increase is attributable to acquisitions made in 2003 and 2004 and additional costs for Sarbanes-Oxley compliance (approximately $0.5 million).

Sales and marketing expense. Sales and marketing expense increased $1.1 million, or 10%, to $12.4 million for the nine months ended September 30, 2004 from $11.3 million for the nine months ended September 30, 2003 due primarily to a general increase in spending on sales and marketing initiatives and acquisitions made in 2003 and 2004 partially offset by the closing of the Japanese sales office (approximately $0.8 million).

*Research and development expense***.** Research and development spending, which includes expenses related to research revenues, was $5.3 million in the nine months ended September 30, 2004 compared to $4.7 million for the same period in 2003. This increase is primarily due to acquisitions made since September 30, 2003.

Stock compensation expense. In the nine months ended September 30, 2004 we recorded approximately $134,000 of stock compensation expense compared to $402,000 for the same period in 2003. For the nine months ended September 30, 2004, this expense is related to options granted prior to our initial public offering and to options granted to certain employees of Warner Instruments and Genomic Solutions whose vesting was accelerated pursuant to separation agreements entered into as part of the restructuring of operations at Warner Instruments and Genomic Solutions. For the nine months ended September 30, 2003, this expense is related to options granted prior to our initial public offering and to options issued in exchange for the outstanding options of Union Biometrica in connection with the acquisition of Union Biometrica. Stock compensation expense has decreased because the Company uses an accelerated vesting method in accordance with FASB Interpretation No. 28 *"Accounting for Stock Appreciation Rights and Other Variable Stock Option or Award Plans,"* which results in decreasing compensation expense from the date of the stock option grant until the vesting dates. During the third quarter of 2004, we have recognized the remaining stock compensation expense of the options granted prior to our initial public offering.

Amortization of intangible assets. Amortization of intangibles was $2.6 million in the nine months ended September 30, 2004 compared to $1.9 million for the same period in 2003. This increase is directly attributed to acquisitions made in 2003 and during the first nine months of 2004 offset by the final purchase price allocation adjustments made in the third quarter of 2004 for our recent acquisitions of BioRobotics, Hoefer and KD Scientific of approximately $0.5 million.

Other income (expense), net. Other expense, net, for the nine months ended September 30, 2004 of $662,000 included approximately $443,000 net interest expense compared to net interest expense of $88,000 for the same period in 2003. This increase in net interest expense is due to cash and interest-bearing debt being increasingly used to fund acquisitions since 2003. Other expense, net, for the nine months ended September 30, 2004 also included a $129,000 foreign exchange loss compared to a $261,000 gain for the same period last year. These exchange gains and losses are primarily the result of currency fluctuations on net payables and receivables between our subsidiaries. Other expense for the nine months ended September 30, 2003 included approximately $790,000 in charges related to the settlement of an arbitration award in favor of the former shareholders of our Union Biometrica subsidiary.

Income taxes. The Company's effective income tax rates were 32.7% for the nine months ended September 30, 2004 and 42.5% for the nine months ended September 30, 2003. The decrease in the effective income tax rate is principally due to the Company incurring a lesser amount of nondeductible expenses in the United States while incurring operating losses in jurisdictions that have greater higher effective income tax rates, principally the United States, and earning operating income in foreign jurisdictions with lower effective income tax rates.

Restructuring

During the first nine months of 2004, the Company recorded restructuring charges of $0.6 million related to restructuring activities at Genomic Solutions (approximately $0.5 million) and Biochrom (approximately $0.1 million), due to the closure of facilities and realignment of our business strategy. These restructuring charges were classified as a component of general and administrative expenses. A rollforward of the restructuring activity is as follows:

	Severance (a)	Facility (b)	Other (c)	Total

December 31, 2003 balance	$ —	$ —	$ —	$ —
2004 restructuring charges	462	45	89	596
2004 cash payments	(329)	(45)	(69)	(443)
2004 non-cash charges	(67)	—	(11)	(78)
September 30, 2004 balance	$ 66	$ —	$ 9	$ 75

(a) Amount represents severance and termination costs for 40 terminated employees .
(b) Amount represents lease payments and other facility closure costs on exited operations.
(c) Amount represents legal costs and professional expenses associated with a facility closure.

Liquidity and Capital Resources

Historically, we have financed our business through cash provided by operating activities, the issuance of common stock and preferred stock, and bank borrowings. Our liquidity requirements have arisen primarily from investing activities, including funding of acquisitions and capital expenditures. As of September 30, 2004, we had cash and cash equivalents of $11.6 million which represents an increase of approximately $3.4 million from December 31, 2003 primarily driven by positive operating cash flow. In connection with our March 2004 acquisition of KD Scientific, we borrowed an additional $6.65 million under our $20 million credit facility with Brown Brothers Harriman. During the quarter ended September 30, 2004, $0.4 million of cash was used to pay down our credit facility. As of September 30, 2004, we had approximately $17.7 million outstanding thereunder.

Overview of Cash Flows for the nine months ended September 30,
(in thousands, unaudited)

	2004	2003
Cash flows from operations:		
Net Income	$ 1,204	$ 2,507
Adjust non-cash items	4,858	3,724
Changes in assets and liabilities	1,390	(5,086)
Cash provided by operations	7,452	1,145
Investing activities:		
Acquisition of businesses	(6,974)	(14,681)
Other Investing activities	(2,311)	(1,000)
Cash used by investing activities	(9,285)	(15,681)
Financing activities:		
Cash provided by debt, net	4,551	6,336
Other financing activities	708	104
Cash provided by financing activities	5,259	6,440
Exchange effect on cash	(56)	360
Increase (decrease) in cash and cash equivalents	$ 3,370	$ (7,736)

Our operating activities generated cash of $7.5 million for the nine months ended September 30, 2004 compared to $1.1 million for the same period in 2003. 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.

Our investing activities used cash of $9.3 million in the first nine months of 2004 compared to $15.7 million for the same period in 2003 primarily for funding acquisitions which are more fully described in Note 4 to our unaudited consolidated financial statements.

Our financing activities have historically consisted of borrowings under a revolving credit facility, long-term debt and the issuance of preferred stock and common stock, including the common stock issued in our initial public offering. Financing activities provided cash of $5.3 million during the first nine months of 2004 compared to $6.4 million during the first nine months of 2003. In the nine months ended September 30, 2004, we borrowed an additional $6.95 million under the $20 million credit facility with Brown Brothers Harriman & Co. to fund the acquisition of KD Scientific and working capital requirements and we repaid $1.65 million. During the first nine months of 2003, we entered into a $6.0 million bridge loan with Brown Brothers Harriman & Co. in anticipation of closing the $20 million credit facility. The bridge loan was repaid in full with the proceeds of the $20 million credit facility which we entered into in November 2003.

Our forecast of the period of time through which our financial resources will be adequate to support our operations is a forward-looking statement that involves risks and uncertainties, and actual results could vary as a result of a number of factors. Based on our current operations and current operating plans, we expect that our available cash, cash generated from current operations and debt capacity will be sufficient to finance current operations and capital expenditures for at least 12 months. However, we may use substantial amounts of capital to accelerate product development or expand our sales and marketing activities. We may need to raise additional capital in order to make significant acquisitions. Additional capital raising activities will dilute the ownership interests of existing stockholders to the extent we raise capital by issuing equity securities. Currently, we are prohibited from accessing the public equity markets due to an outstanding amendment to a Current Report on Form 8-K in connection with a previous acquisition. In addition, we are not currently eligible to use Form S-3 to affect a registration of our equity as a result of this delinquent filing. We are in the process of seeking to complete this

outstanding filing and anticipate that we will become current with our required filings under Form 8-K. Once we become current with our SEC filings, we will immediately become eligible to register equity and will be eligible to use Form S-3 twelve months after the initial due date of the outstanding Form 8-K amendment. However, until this matter is resolved, our ability to raise capital may be limited to private equity transactions and/or additional borrowing and may result in entering into an agreement on less than favorable terms. In addition, our credit facility with Brown Brothers Harriman contains limitations on our ability to incur additional indebtedness and requires creditor approval for acquisitions funded with cash in excess of $6 million and for those which may be funded with equity in excess of $10 million. Accordingly, there can be no assurance that we will be successful in raising additional capital on favorable terms or at all.

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. During the first nine months of 2004 and 2003, the U.S. dollar weakened against these currencies resulting in increased consolidated revenue and earnings growth. For the nine months ending September 30, 2004, there was a $0.4 million gain associated with the translation of foreign equity into U.S. dollars and approximately $1.3 million gain for the nine months ending September 30, 2003. In addition, the currency fluctuations resulted in approximately $39,000 in foreign currency gain and $129,000 in foreign currency loss for the three and nine months ended September 30, 2004, respectively, and $291,000 and $261,000 in foreign currency gain for the three and nine months ended September 30, 2003, respectively. These exchange gains and losses are primarily the result of currency fluctuations on net payables and receivables between our subsidiaries.

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 evaluate our currency risks and we may enter into foreign exchange contracts from time to time to mitigate foreign currency exposure.

Critical Accounting Policies

We believe that our critical accounting policies are as follows:

- revenue recognition;
- inventory;
- valuation of identifiable intangible assets and in-process research and development in business combinations;
- valuation of long-lived and intangible assets and goodwill; and
- accounting for income taxes

Revenue recognition. The Company recognizes revenue of products when persuasive evidence of a sales arrangement exists, the price to the buyer is fixed or determinable, delivery has occurred, and collectibility of the sales price is reasonably assured. Sales of some of our products include provisions to provide additional services such as installation and training. The Company evaluates all sales with multiple deliverables, including our collaboration agreements, to determine if more than one unit of accounting exists, in accordance with EITF Issue No. 00-21, *"Revenue Arrangements with Multiple Deliverables."* Revenue for each unit of accounting is recorded once all applicable revenue recognition criteria have been met. The Company accounts for shipping and handling fees and costs in accordance with EITF Issue No. 00-10, *"Accounting for Shipping and Handling Fees and Costs*," which requires all amounts charged to customers for shipping and handling to be classified as revenues. The costs related to shipping and handling are classified as cost of product revenues. Warranties and product returns are estimated and accrued for at the time sales are recorded. The Company has no obligations to customers after the date products are shipped or installed, if applicable, other than pursuant to warranty obligations and service or maintenance contracts. The Company provides for the estimated amount of future returns upon shipment of products or installation, if applicable, based on historical experience. While product returns and warranty costs have historically not been significant, they have been within our expectations and the provisions established, however, there is no assurance that we will continue to experience the same return rates and warranty repair costs that we have in the past. Any significant increase in product return rates or a significant increase in the cost to repair our products could have a material adverse impact on our operating results for the period or periods in which such returns or increased costs materialize.

The Company makes estimates evaluating its allowance for doubtful accounts. On an ongoing basis, the Company monitors collections and payments from its customers and maintains a provision for estimated credit losses based upon our historical experience and any specific customer collection issues that we have identified. While such credit losses have historically not been significant, they have been within our expectations and the provisions established, however, there is no assurance that we will continue to experience the same credit loss rates that we have in the past. A significant change in the liquidity or financial position of our customers could have a material adverse impact on the collectibility of our accounts receivable and our future operating results.

Inventory. The Company values its inventory at the lower of the actual cost to purchase (first-in, first-out method) and/or manufacture the inventory or the current estimated market value of the inventory. The Company regularly reviews inventory quantities on hand and records a provision to write down excess and obsolete inventory to its estimated net realizable value if less than cost, based primarily on its estimated forecast of product demand. Since forecasted product demand quite often is a function of previous and current demand, a significant decrease in demand could result in an increase in the charges for excess inventory quantities on hand. In addition, the Company's industry is subject to technological change and new product development, and technological advances could result in an increase in the amount of obsolete inventory quantities on hand. Therefore, any significant unanticipated changes in demand or technological developments could have a significant adverse impact on the value of the Company's inventory and its reported operating results.

Valuation of identifiable intangible assets in business combinations. Identifiable intangible assets consist primarily of trademarks and acquired technology. Such intangible assets arise from the allocation of the purchase price of businesses acquired to identifiable intangible assets based on their respective fair market values. Amounts assigned to such identifiable intangible assets are primarily based on independent appraisals using established valuation techniques and management estimates. The value assigned to trademarks was determined by estimating the royalty income that would be negotiated at an arm's-length transaction if the asset were licensed from a third party. A discount factor, ranging from 20% to 40%, which represents both the business and financial risks of such investments, was used to determine the present value of the future streams of income attributable to trademarks. The specific approach used to value trademarks was the Relief from Royalty ("RFR") method. The RFR method assumes that an intangible asset is valuable because the owner of the asset avoids the cost of licensing that asset. The royalty savings are then calculated by multiplying a royalty rate times a determined royalty base, i.e., the applicable level of future revenues. In determining an appropriate royalty rate, a sample of guideline, arm's length royalty and licensing agreements are

analyzed. In determining the royalty base, forecasts are used based on management's judgments of expected conditions and expected courses of actions. The value

assigned to acquired technology was determined by using a discounted cash flow model which measures what a buyer would be willing to pay currently for the future cash stream potential of existing technology. The specific method used to value the technologies involved estimating future cash flows to be derived as a direct result of those technologies, and discounting those future streams to their present value. The discount factors used, ranging from 20% to 40%, reflects the business and financial risks of an investment in technologies. Forecasts of future cash flows are based on managements' judgment of expected conditions and expected courses of action.

Valuation of in-process research and development in business combinations. Purchase price allocation to in-process research and development represents the estimated fair value of research and development projects that are reasonably believed to have no alternative future use. The value assigned to in-process research and development was determined by independent appraisals by estimating the cost to develop the purchased in-process research and development into commercially feasible products, estimating the percentage of completion at the acquisition date, estimating the resulting net risk-adjusted cash flows from the projects and discounting the net cash flows to their present value. The discount rates used in determining the in-process research and development expenditures reflects a higher risk of investment because of the higher level of uncertainty due in part to the nature of the Company and the industry to constantly develop new technology for future product releases and ranged from 25% to 43.5%. The forecasts used by the Company in valuing in-process research and development were based on assumptions the Company believed at the time to be reasonable, but which are inherently uncertain and unpredictable. Given the uncertainties of the development process, no assurance can be given that deviations from the Company's estimates will occur and no assurance can be given that the in-process research and development projects identified will ever reach either technological or commercial success.

Valuation of long-lived and intangible assets and goodwill. In accordance with the provisions of SFAS No. 144, Accounting for the Impairment or Disposal of Long-Lived Assets, we assess the impairment of identifiable intangibles with finite lives and long-lived assets whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Factors we consider important which could trigger an impairment review include the following: significant underperformance relative to expected historical or projected future operating results; significant changes in the manner of our use of the acquired assets or the strategy for our overall business; significant negative industry or economic trends; significant changes in who our competitors are and what they do; significant changes in our relationship with GE Healthcare (formerly Amersham Biosciences); significant decline in our stock price for a sustained period; and our market capitalization relative to net book value.

If we were to determine that the value of long-lived assets and identifiable intangible assets with finite lives was not recoverable based on the existence of one or more of the aforementioned factors, then the recoverability of those assets to be held and used would be measured by a comparison of the carrying amount of those assets to undiscounted future net cash flows before tax effects expected to be generated by those assets. If such assets are considered to be impaired, the impairment to be recognized would be measured by the amount by which the carrying value 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 dispose.

In June 2001, SFAS No. 142, *Goodwill and Other Intangible Assets* was issued. SFAS No. 142 addresses financial accounting and reporting for acquired goodwill and other intangible assets. Among other things, SFAS No. 142 requires that goodwill and intangible assets with indefinite useful lives no longer be amortized, but rather tested annually for impairment or more frequently if events or circumstances indicate that there may be impairment. The impairment test consists of a comparison of the fair value of the Company's reporting units with their carrying amount. If the carrying amount exceeds its fair value, the Company is required to perform the second step of the impairment test, as this is an indication that goodwill may be impaired. The impairment loss is measured by comparing the implied fair value of the reporting unit's goodwill with its carrying amount. If the carrying amount exceeds the implied fair value, an impairment loss shall be recognized in an amount equal to the excess. After an impairment loss is recognized, the adjusted carrying amount of the intangible asset shall be its new accounting basis. Subsequent reversal of a previously recognized impairment loss is prohibited. In accordance with SFAS No. 142, the Company performed its annual impairment test on December 31, 2003, which did not indicate any impairment.

Accounting for income taxes. We are required to determine our annual income tax provision in each of the jurisdictions in which we operate. This involves determining our current and deferred income tax expense as well as accounting for differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. The future tax consequences attributable to these differences result in deferred tax assets and liabilities, which are included in our consolidated balance sheets. We must assess the recoverability of the deferred tax assets by considering whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. To the extent we believe that recovery does not meet this "more likely than not" standard as required in SFAS No. 109, *Accounting for Income Taxes*, we must establish a valuation allowance. If a valuation allowance is established or increased in a period, we must allocate the related income tax expense to income from continuing operations in the consolidated statement of operations to the extent those deferred tax assets originated from continuing operations. To the extent income tax benefits are allocated to stockholders' equity, the related valuation allowance also must be allocated to stockholders' equity.

Management judgment and estimates are required in determining our income tax provision, deferred tax assets and liabilities and any valuation allowance recorded against net deferred tax assets. We have established a valuation allowance attributable to certain acquisition-related temporary differences as we believe that a portion of the deferred tax assets at September 30, 2004 will not meet the "more likely than not" standard for realization in the carryback and carryforward periods based on the criteria set forth in SFAS No. 109. We review the recoverability of deferred tax assets during each reporting period by reviewing previous estimates of future taxable income and comparing them to current estimates, and when appropriate, by reviewing possible tax planning strategies that would prevent the loss of the recoverability of any portion of the deferred tax asset that may occur due to expiration.

Recent Accounting Pronouncements

In December 2003, the FASB issued SFAS Interpretation No. 46 (revised December 2003) ("FIN 46R"), *Consolidation of Variable Interest Entities*, which addresses how a business enterprise should evaluate whether it has a controlling financial interest in an entity through means other than voting rights and accordingly should consolidate the entity. FIN 46R replaces SFAS Interpretation No. 46, *Consolidation of Variable Interest Entities,* which was issued in January 2003. The Company was required to adopt certain provisions of FIN 46R as of December 31, 2003 and the remaining provisions as of March 31, 2004. The adoption of this Interpretation did not have a material impact on the Company's consolidated results of operations or financial position.

In December 2003, Statement of Financial Accounting Standards ("SFAS") No. 132 (revised), *Employers' Disclosures about Pensions and Other Postretirement Benefits*, was issued. SFAS No. 132 (revised) prescribes employers' disclosures about pension plans and other postretirement benefit plans; it does not change the measurement or recognition of those plans. The Statement retains and revises the disclosure requirements contained in the original SFAS No. 132. It also requires additional disclosures about the assets, obligations, cash flows, and net periodic benefit cost of defined benefit pension plans and other postretirement benefit plans. The Statement generally is effective for fiscal years ending after December 15, 2003, however as all of the Company's pension plans covered by this Statement are outside of the United States the provisions of SFAS No. 132 or not applicable until 2004. The Company adopted the applicable interim disclosure requirements of SFAS No. 132 (revised) as of January 1, 2004. See Note 11 to the unaudited consolidated financial statements. The Company will be required to adopt the remaining disclosure requirements of this Statement as of December 31, 2004.

Cautionary Factors

Our operating results may vary significantly from quarter to quarter and year to year depending on a number of factors, including:

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 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 as rapidly as expected or at all. Future acquisitions could reduce stockholders' ownership, cause us to incur debt, expose us to future liabilities and result in amortization expenses related to intangible assets with definite lives.

Uncertain economic trends may adversely impact our business.

We have experienced and may continue to experience reduced demand for our products as a result of the uncertainty in the general economic environment in which we and our customers operate. We cannot project the extent of the impact of the economic environment specific to our industry. If economic conditions worsen or if an economic slowdown occurs, we may experience a material adverse effect on our business, operating results, and financial condition.

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

Our quarterly revenues will likely be affected by various factors, including the volatility and seasonal timing of capital equipment purchases by customers and the volatile and seasonal nature of purchasing in Europe. Our revenues may vary from quarter to quarter due to a number of factors, including the seasonal nature of the capital equipment market, the timing of catalog mailings and new product introductions, future acquisitions and our substantial sales to European customers, who in summer months often defer purchases. With the acquisitions of Union Biometrica in May 2001, Genomic Solutions in October 2002, GeneMachines in March 2003 and BioRobotics in September 2003, an increasing portion of our revenues are the result of sales of relatively high-priced products, considered to be capital equipment. The capital equipment market is very volatile and seasonal and as such, we will experience substantial fluctuations in our quarterly revenues. Additionally, reduced demand, delays in purchase orders, receipt, manufacture, shipment or receivables collection of these relatively high-priced products could lead to substantial variability in revenues, operating results and working capital requirements from quarter-to-quarter, which could adversely affect our stock price. In particular, delays or reduction in purchase orders from the pharmaceutical and biotechnology industries could have a material adverse effect on us.

We may misinterpret trends of our capital equipment product lines due to the cyclical nature of the capital equipment purchasing market.

The cyclical buying pattern of the capital equipment purchasing market could mask or exaggerate the economic trends underlying the market for our capital equipment product lines. Specifically, a decline in any quarter that is typically a quarter that we would expect to contribute less than one-quarter projected revenue for the year, could be misinterpreted if the decline was due instead to a negative trend in the market or in the demand for our products. Conversely, an increase in any quarter that is typically a quarter that we would expect to contribute less than one-quarter of projected revenue for the year, could be misinterpreted as a favorable trend in the market and in the demand for our products. This could have a material adverse effect on our operations.

We may not realize the expected benefits of our recent acquisitions of BTX, GeneMachines, BioRobotics, Hoefer and KD Scientific due to difficulties integrating the businesses, operations and product lines.

Our ability to achieve the benefits of our recent acquisitions of BTX, GeneMachines, BioRobotics, Hoefer and KD Scientific will depend in part on the integration and leveraging of technology, operations, sales and marketing channels and personnel. The integration process is a complex, time-consuming and expensive process and may disrupt our business if not completed in a timely and efficient manner. The challenges involved in this integration include the following:

- demonstrating to customers and suppliers that the acquisitions will not result in adverse changes in client service standards or business focus and
- addressing any perceived adverse changes in business focus.

We may have difficulty successfully integrating the acquired businesses, the domestic and foreign operations or the product lines, and as a result, we may not realize any of the anticipated benefits of the acquisitions. Additionally, we cannot assure that our growth rate will equal the growth rates that have been experienced by us and the acquired companies, respectively, operating as separate companies in the past.

Genomic Solutions, our subsidiary acquired in October 2002, has a history of losses and may not be able to sustain profitability.

Prior to our acquisition, Genomic Solutions incurred net losses of $4.0 million for the six months ended June 30, 2002, $26.1 million for the year ended December 31, 2001, $8.9 million for the year ended December 31, 2000 and $11.1 million for the year ended December 31, 1999. As of June 30, 2002, Genomic Solutions had an accumulated deficit of $72.0 million. In September 2001, Genomic Solutions instituted a restructuring plan designed to reduce its operating expenses. In July 2002, Genomic Solutions announced a further restructuring of its operations. However, even with these restructurings, Genomic Solutions needs to generate significant revenues to achieve and maintain profitability.

Genomic Solutions' revenue growth depends on many factors, many of which are beyond its control, including factors discussed in this risk factors section. Additionally, Genomic Solutions may not sustain revenue growth, as evidenced through the first nine months of 2004, due to difficulties in integrating its acquisitions of GeneMachines and BioRobotics which resulted in a further restructuring in June 2004. Even if Genomic Solutions does achieve profitability, it may not sustain or increase profitability on a quarterly or annual basis.

As an acquisitive company, we may be the subject of lawsuits from either an acquired company's previous stockholders or our current stockholders.

As an acquisitive company, we may be the subject of lawsuits from either an acquired company's previous stockholders or our current stockholders. These lawsuits could result from the actions of the acquisition target prior to the date of the acquisition, from the acquisition transaction itself or from actions after the acquisition. Defending potential lawsuits could cost us significant expense and detract management's attention from the operation of the business. Additionally, these lawsuits could result in the cancellation of or the inability to renew, certain insurance coverage that would be necessary to protect our assets.

Accounting for goodwill may have a material adverse effect on us.

We have historically amortized goodwill purchased in our acquisitions on a straight-line basis ranging from five to 15 years. Upon the adoption of SFAS No. 142, goodwill and intangible assets with indefinite lives from acquisitions after June 30, 2001 and existing goodwill and intangible assets with indefinite lives from acquisitions prior to July 1, 2001 that remain as of December 31, 2001 are no longer amortized, but instead are evaluated annually to determine whether any portion of the remaining balance of goodwill and indefinite lived intangibles may not be recoverable, or more frequently, if events or circumstances indicate there may be an impairment. If it is determined in the future that a portion of our goodwill and intangible assets with indefinite lives is impaired, we will be required to write off that portion according to the methods defined by SFAS No. 142 of the asset which could have an adverse effect on net income for the period in which the write off occurs. At September 30 2004, we had goodwill and intangible assets with indefinite lives of $41.5 million, or 30% of our total assets.

If our accounting estimates are not correct, our financial results could be adversely affected.

Management judgment and estimates are necessarily required in the application of our Critical Accounting Policies. We discuss these estimates in the subsection entitled Critical Accounting Policies beginning on page 22. If our estimates are incorrect, our future financial operating results and financial condition could be 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 47% and 46%, respectively, of total revenues for the three and nine months ended September 30, 2004. We anticipate that revenue from international operations will continue to represent a substantial portion of 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 gain of approximately $39,000 and a foreign currency loss of approximately $129,000 for the three and nine months ended September 30, 2004 and a decrease in foreign equity of approximately $18,000 for the three months ended September 30, 2004 and an increase of foreign equity of approximately $424,000 for the nine months ended September 30, 2004.
- changes in a specific country's or region's political or economic conditions, including western Europe and Japan, in particular,
- potentially negative consequences from changes in tax laws affecting the ability to expatriate profits,
- difficulty in staffing and managing widespread operations, and
- unfavorable labor regulations applicable to European operations, such as severance and the unenforceability of non-competition agreements in the European Union.

We may lose money when we exchange foreign currency received from international revenues into U.S. dollars.

For the three and nine months ended September 30, 2004, approximately 44% and 42%, respectively, of our business was conducted in functional 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.

Failure to complete all aspects of our assessment of internal controls over financial reporting required by the Sarbanes-Oxley Act of 2002 may result in a decrease in our stock price.

In addition to our responsibilities with respect to an evaluation of our disclosure controls and procedures, we, under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, are in the process of performing the assessments required by Section 404 of the Sarbanes-Oxley Act of 2002 and the related rules adopted by the Securities and Exchange Commission (collectively, the "Section 404 requirements"). We will be required to include a report on management's assessment of the effectiveness of our internal controls over financial reporting in our Annual Report on Form 10¬K for the year ending December 31, 2004. Our independent registered public accounting firm will also be required to attest to and report on management's assessment of the effectiveness of our internal controls over financial reporting. While we have been and continue to devote significant resources to prepare for the Section 404 requirements, much work remains to be completed and we cannot assure you that our management will be able to complete all aspects of its assessment by the December 31, 2004 deadline or that our independent auditor will be able to complete all aspects of the testing necessary to attest to management's assessment. Further, since testing of key controls is still in process we cannot assure you that, once completed, management's assessment and the auditor's attestation will not report any material weaknesses or significant deficiencies in our internal controls over financial reporting.

Additional costs for complying with recent changes in Securities and Exchange Commission, Nasdaq Stock Market and accounting rules could adversely affect our profits.

Recent changes in the Securities and Exchange Commission and Nasdaq rules including the Sarbanes-Oxley Act of 2002, as well as changes in accounting rules, will cause us to incur significant additional costs including professional fees, as well as additional personnel costs, in order to keep informed of the changes and operate in a compliant manner. These additional costs, which we believe could exceed $1 million during 2004, may be significant enough to cause our growth targets to be reduced, and consequently, our financial position and results of operations may be negatively impacted.

With new rules, including the Sarbanes-Oxley Act of 2002, we may have difficulty in retaining or attracting officers, directors for the board and various sub-committees thereof.

The recent changes in SEC and Nasdaq rules, including those resulting from the Sarbanes-Oxley Act of 2002, may result in us being unable to attract and retain the necessary officers, board directors and members of board-committees thereof, to effectively manage. The perceived increased personal risk associated with these recent changes, may deter qualified individuals from wanting to participate in these roles.

We may have difficulty obtaining adequate directors' and officers' insurance and the cost for coverage may significantly increase.

As an acquisitive company, we may have difficulty in obtaining adequate directors' and officers' insurance to protect us and our directors and officers from claims made against them. Additionally, even if adequate coverage is available, the costs for such coverage may be significantly greater than current costs. This additional cost may have a significant effect on our profits and as a result our results of operations may be adversely affected.

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 both through organic growth and acquisitions. Effective growth management will place increased demands on management, operational and financial resources and expertise. To manage growth, we must expand our facilities, augment our operational, financial and management systems, and hire and train additional qualified personnel. 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 or reduced profitability as evidenced in our first nine months of 2004 results.

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

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 at any time upon short notice. The loss of the services of any member of the senior management team, including the Chief Executive Officer, Chane Graziano, the President, David Green, the Chief Operating Officer, Susan Luscinski, the Chief Financial Officer, Bryce Chicoyne or any of the managerial, 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 general management, finance, information technology, engineering and science, and the process of hiring suitably qualified personnel is often lengthy and expensive, and may become more expensive in the future. If 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.

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 the 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,

- analytical instrument companies and
- companies developing drug discovery technologies.

Currently, our principal competition comes from established companies that provide products that 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 the field. We may not have the financial resources, technical expertise or marketing, distribution or support capabilities to compete successfully in the future.

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 existing products and develop new products. To meet the evolving needs of its customers, we must continually enhance our current and planned products and develop and introduce new products. However, we may experience difficulties that 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 that 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 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 entered into a $20 million credit facility in November 2003 which contains certain financial and negative covenants the breach of which may adversely affect our financial condition.

We anticipate that our operations will support the covenants required as part of the $20 million revolving credit facility with Brown Brothers Harriman. However, if we are not in compliance with certain of these covenants, in addition to other actions the creditor may require, the amounts drawn on the $20 million facility may become immediately due and payable. This immediate payment may negatively impact our financial condition and we may be forced by our creditor into actions which may not be in our best interests.

Failure to raise additional capital or generate the significant capital necessary to implement our acquisition strategy, expand our operations and invest in new products could reduce our ability to compete and result in lower revenue.

We anticipate that our financial resources which include available cash, cash generated from operations, and debt and equity capacity, will be sufficient to finance operations and capital expenditures for at least twelve months. However, this expectation is premised on the current operating plan, which may change as a result of many factors, including market acceptance of new products and future opportunities with collaborators. Consequently, we may need additional funding sooner than anticipated. Our inability to raise capital could seriously harm our business and product development and acquisition efforts.

If we raise additional funds through the sale of equity or convertible debt or equity-linked securities, existing percentages of ownership in our common stock will be reduced. In addition, these transactions may dilute the value of our outstanding common 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. We may be unable to raise additional funds on acceptable terms or at all. In addition, our credit facility with Brown Brothers Harriman contains limitations on our ability to incur additional indebtedness and requires creditor approval for acquisitions funded with cash in excess of $6 million and for those which may be funded with equity in excess of $10 million. Currently, we are prohibited from accessing the public equity markets due to an outstanding amendment to a Current Report on Form 8-K in connection with a previous acquisition. In addition, we are not currently eligible to use Form S-3 to effect a registration of our equity as a result of this delinquent filing. We are in the process of seeking to complete this outstanding filing and anticipate that we will become current with our required filings under Form 8-K. Once we become current with our SEC filings, we will immediately be eligible to register equity and will be eligible to use Form S-3 twelve months after the initial due date of the outstanding Form 8-K amendment. However, until this matter is resolved, our ability to raise capital may be limited to private equity transactions and/or additional borrowing and may result in entering into an agreement on less than favorable terms. If future financing is not available or is not available on acceptable terms, we may have to curtail operations or change our business strategy.

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 certain of 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 27 U.S. patents and have 26 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. 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 that 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 that 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 is 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.

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 one of our major sources 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 customers purchasing fewer products from us as they reduce their research and development expenditures.

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

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 and purchasing patterns 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 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.

If we are unable to achieve and sustain market acceptance of our target validation, high-throughput screening, assay development and ADMET screening products across their broad intended range of applications, we will not generate expected revenue growth and could adversely affect profits.

Our business strategy depends, in part, on successfully developing and commercializing our ADMET screening, molecular biology, high-throughput/high-content screening, and genomics, proteomics and high-throughput screening to meet customers' expanding needs and demands, an example of which is the COPAS™ and MIAS technologies obtained from the 2001 acquisition of Union Biometrica. Market acceptance of this and other new products will depend on many factors, including the extent of our marketing efforts and our ability to demonstrate to existing and potential customers that our technologies are superior to other technologies or techniques and products that are available now or may become available in the future. If our new products do not gain market acceptance, or if market acceptance occurs at a slower rate than anticipated, it could materially adversely affect our business and future growth prospects and could result in a goodwill and/or intangible impairment loss.

If GE Healthcare (formerly Amersham Biosciences) terminates its distribution agreements with us or fails to perform its obligations under the distribution agreements, it could impair the marketing and distribution efforts for some of our products and result in lost revenues.

General Electric recently acquired Amersham plc, the parent of Amersham Biosciences. In connection with the acquisition, Amersham Biosciences was renamed GE Healthcare ("GE"). While GE has indicated its intention to continue Amersham's presence in the life science market, and we believe our relationship with GE is good, we cannot guarantee that the distribution agreements will be renewed, that GE will aggressively market our products in the future or that GE will continue the partnership.

For both the three and nine month periods ended September 30, 2004, approximately 17% of our revenues were generated through two distribution agreements with GE. The first distribution agreement was renegotiated in August 2001. Under this agreement, GE acts as the primary marketing and distribution channel for the majority of the products of our Biochrom subsidiary and, as a result, we are restricted from allowing another person or entity to distribute, market and sell the majority of the products of our Biochrom subsidiary into the life sciences market. 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 GE or its authorized sub-distributors. We have little or no control over GE's marketing and sales activities or the use of its resources. GE may fail to purchase sufficient quantities of products from us or perform appropriate marketing and sales activities. The failure by GE 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 GE for product distribution could materially impede the growth of our business and our ability to generate sufficient revenue. Our agreement with GE may be terminated with 30 days notice under certain circumstances. This agreement has an initial term of three years, commencing August 1, 2001, after which it will automatically renew for an additional two years, unless terminated earlier by either party. In addition, the agreement may be terminated in accordance with its terms by either party upon 18 months prior written notice.

The second distribution agreement, between Hoefer, Inc., our subsidiary, and GE was entered into in November 2003 in connection with our acquisition of certain assets of the Hoefer 1-D gel electrophoresis business, , including the Hoefer name, from Amersham Bioscience. The agreement provides that Hoefer will be the exclusive supplier of 1-D gel electrophoresis products to GE. Hoefer also has the right to develop, manufacture and market 2-D gel electrophoresis products, which would be offered to GE for sale under the GE brand name. Hoefer has the right to sell any of its products, under the Hoefer brand name or any other non-GE brand name, through other distribution channels, both direct and indirect. The initial term of the agreement is five years with an automatic five year renewal period. GE may terminate the agreement during the renewal period if they decide to cease all activities in 1-D gel electrophoresis or if Hoefer fails to deliver new 1-D gel electrophoresis products.

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

On February 4, 2002, Paul D. Grindle, the former owner of Harvard Apparatus, Inc., initiated an arbitration proceeding against us and certain directors before JAMS in Boston, Massachusetts. Mr. Grindle's claims arise out of post-closing purchase price adjustments related to our purchase of the assets and business of Harvard Apparatus by virtue of an Asset Purchase Agreement dated March 15, 1996 and certain related agreements. In the arbitration demand, Mr. Grindle sought the return of 1,563,851 shares of our common stock , or the disgorgement of the profits of our sale of the stock, as well as compensatory damages and multiple damages and attorney's fees under Mass. Gen. Laws, chapter 93A. In a demand letter that was attached to the arbitration demand, Mr. Grindle asserted losses in the amount of $15 million, representing the value of the 1,563,851 shares of our common stock as of January 2, 2002. On October 30, 2002, we received a decision from the arbitrator that we had prevailed on all claims asserted against us and certain of our directors in the arbitration action. Specifically, we received a written decision from the arbitrator granting our motion for summary disposition with respect to all claims brought against all parties in the action. We filed a complaint in the Massachusetts Superior Court seeking to confirm the arbitrator's decision. Mr. Grindle filed a complaint in the Massachusetts Superior Court seeking to vacate the arbitrator's decision. These two matters were consolidated. On or about July 30, 2003, the Massachusetts Superior Court granted our motion to confirm the arbitrator's decision and to deny Mr. Grindle's motion to vacate. Mr. Grindle has filed a notice of appeal with the Massachusetts Appeals Court. Both Mr. Grindle and the Company have filed briefs with the Massachusetts Appeals Court. The matter is pending. Mr. Grindle also filed an application for direct appellate review with the Massachusetts Supreme Judicial Court, which was denied.

Customer, vendor and employee uncertainty about the effects of any of our acquisitions could harm us.

We and the acquired companies' customers may, in response to the consummation of the acquisitions, delay or defer purchasing decisions. Any delay or deferral in purchasing decisions by customers could adversely affect our business. Similarly, employees of acquired companies may experience uncertainty about their future role until or after we execute our strategies with regard to employees of acquired companies. This may adversely affect our ability to attract and retain key management, sales, marketing and technical personnel following an acquisition.

A significant portion of the sales cycle for our products is lengthy and we may spend significant time on sales opportunities with no assurance of success.

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

Ethical concerns surrounding the use of our products and misunderstanding of the nature of our business could adversely affect our ability to develop and sell our existing products and new products.

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

Genomic and proteomic research is used to determine the role of genes and proteins in living organisms. Our products are designed and used for genomic and proteomic research and drug discovery and are generally not well suited for human screening. However, it is possible that government authorities and the public may fail to distinguish between the genetic screening of humans and genomic and proteomic research. If this occurs, our products and the processes for which our products are used may be subjected to government regulations intended to affect genetic screening. Further, if the public fails to distinguish between the two fields, it may pressure our customers to discontinue the research and development initiatives for which our products are used.

Additionally, some of our products may be used in areas of research involving cloning, stem cell use, organ transplants and other techniques presently being explored in the drug discovery industry. These techniques have drawn much negative attention recently in the public forum and could face similar risks to those identified above surrounding products for genomic and proteomic research.

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

The market price of our common stock has experienced significant fluctuations and may become volatile and could decline in the future, perhaps substantially, in response to various factors including:

- technological innovations by competitors or in competing technologies,
- revenues and operating results fluctuating or failing to meet the expectations of management, securities analysts, or investors in any quarter,
- termination or suspension of equity research coverage by securities' analysts,
- comments of securities analysts and mistakes by or misinterpretation of comments from analysts,
- downward revisions in securities analysts' estimates or management guidance,
- investment banks and securities analysts may themselves be subject to suits that may adversely affect the perception of the market,
- conditions or trends in the biotechnology and pharmaceutical industries,
- announcements of significant acquisitions or financings or changes in strategic partnerships,

- non-compliance with the internal control standards pursuant to the Sarbanes-Oxley act of 2002, and
- a decrease in the demand for our common stock.

In addition, the stock market and the Nasdaq National Market in general, and the biotechnology industry and small cap markets in particular, have experienced significant price and volume fluctuations that at times may 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 management's attention and resources.

Provisions of Delaware law and of our charter and bylaws may make a takeover more difficult which could cause our stock price to decline.

Provisions in our certificate of incorporation and bylaws and in the Delaware corporate law may make it difficult and expensive for a third party to pursue a tender offer, change in control or takeover attempt which is opposed by management and the board of directors. Public stockholders who might desire to participate in such a transaction may not have an opportunity to do so. We also have a staggered board of directors that makes it difficult for stockholders to change the composition of the board of directors in any one year. These anti-takeover provisions could substantially impede the ability of public stockholders to change 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.

An active trading market for our common stock may not be sustained.

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

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

Cash dividends will not be paid on our common stock.

Currently, we intend to retain all of our earnings to finance the expansion and development of our business and do not anticipate paying any cash dividends in the near future. As a result, capital appreciation, if any, of our common stock will be a stockholder's sole source of gain for the near future.

The merger with Genomic Solutions may fail to qualify as a reorganization for federal income tax purposes, resulting in the recognition of taxable gain or loss in respect of our treatment of the merger as a taxable sale.

Both us and Genomic Solutions intended the merger to qualify as a reorganization within the meaning of Section 368(a) of the Internal Revenue Code of 1986, as amended. Although the Internal Revenue Service, or IRS, will not provide a ruling on the matter, Genomic Solutions obtained a legal opinion from its tax counsel that the merger constitutes a reorganization for federal income tax purposes. This opinion does not bind the IRS or prevent the IRS from adopting a contrary position. If the merger fails to qualify as a reorganization, the merger would be treated as a deemed taxable sale of assets by Genomic Solutions for an amount equal to the merger consideration received by Genomic Solutions' stockholders plus any liabilities assumed by us. As successor to Genomic Solutions, we would be liable for any tax incurred by Genomic Solutions as a result of this deemed asset sale.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

We manufacture and test the majority of products in locations throughout the United States, the United Kingdom and Germany. We sell our products globally through our direct catalog sales and indirect distributor channel. As a result, our financial results are affected by factors such as changes in foreign currency exchange rates and weak economic conditions in foreign markets.

We collect amounts representing a substantial portion of our revenues and pay amounts representing a substantial portion of our operating expenses in foreign currencies. As a result, changes in currency exchange rates from time to time may affect our operating results. 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 continue to evaluate currency risks and we may enter into foreign exchange contracts from time to time to mitigate foreign currency exposure.

As of September 30, 2004, we had $17.7 million in long term debt for amounts drawn against our revolving credit facility. A 10% change in interest rates, from the September 30, 2004 rate of 4.75% to 5.23%, would change the annual interest expense on this long term debt by approximately $85,000. Effective September 21, 2004, the interest rate on this credit facility increased to 4.75%, coinciding with a change in the prime lending rate.

Item 4. Controls and Procedures.

As required by Rules 13a-15 and 15d-15 under the Securities Exchange Act of 1934 we have evaluated, with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, the effectiveness of our disclosure controls and procedures as of the end of the period covered by this report. In designing and evaluating our disclosure controls and procedures, we and our management recognize that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and our management necessarily was required to apply its judgment in evaluating and implementing possible controls and procedures. Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that they believe that our disclosure controls and procedures are reasonably effective to ensure that information required to be disclosed by us in the reports we file or submit under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Securities and Exchange Commission's rules and forms. We continue to review, document and test our internal controls over financial reporting, and may from time to time make changes aimed at enhancing their effectiveness and to ensure that our systems evolve with our business. These efforts have led to various changes in our internal controls over financial reporting. There were no changes in our internal controls over financial reporting that occurred during the quarter ended September 30, 2004 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 6. Exhibits

Exhibit Index

10.1	Form of Incentive Stock Option Agreement Executive Officers
10.2	Form of Non-Qualified Stock Option Agreement Executive Officers
10.3	Form of Non-Qualified Stock Option Agreement Non-Employee Board of Directors
31.1	Certification of Chief Financial Officer of Harvard Bioscience, Inc., pursuant to Rules 13a-15(e) and 15d-15(e), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Executive Officer of Harvard Bioscience, Inc., pursuant to Rules 13a-15(e) and 15d-15(e), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1*	Certification of Chief Financial Officer of Harvard Bioscience, Inc., pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2*	Certification of Chief Executive Officer of Harvard Bioscience, Inc., pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

* This certification shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liability of that section, nor shall it be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934.

SIGNATURES

Pursuant to the requirements of Section 13 and 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by undersigned thereunto duly authorized.

HARVARD BIOSCIENCE, INC.

By: /s/ Chane Graziano
Chane Graziano
Chief Executive Officer

By: /s/ Bryce Chicoyne
Bryce Chicoyne
Chief Financial Officer

Date: November 9, 2004

INCENTIVE STOCK OPTION TO PURCHASE SHARES OF COMMON
STOCK UNDER THE HARVARD BIOSCIENCE, INC.
2000 STOCK OPTION AND INCENTIVE PLAN

Shares

(Option Issuance Date)

Pursuant to the Harvard Bioscience, Inc. 2000 Stock Option and Incentive Plan (the "Plan"), Harvard Bioscience, Inc., a Delaware corporation (including its successors, the "Company"), hereby grants to (the "Optionee") an option to purchase (the "Option") prior to the tenth (10th) anniversary of the date hereof (the "Expiration Date"), at an exercise price per share of $ all or any of shares of Common Stock, $.01 par value, of the Company (the "Shares"), subject to the terms and conditions set forth herein and in the Plan (the "Agreement"). This Option is intended to be an Incentive Stock Option granted under the Plan.

1. Vesting Schedule. No portion of this Option may be exercised until such portion shall have vested. Except as set forth below and subject to the terms and conditions set forth below, this Option shall be vested and exercisable with respect to the following number of Shares on the dates indicated:

Cumulative Number of Shares Exercisable	**Vesting Date**
(25%)	
(50%)	
(75%)	
(100%)	

Once vested, this Stock Option shall continue to be exercisable at any time or times prior to the close of business on the Expiration Date, subject to the provisions hereof and of the Plan.

2. Manner of Exercise. The Optionee may exercise the Option only in the following manner: From time to time prior to the Expiration Date, the Optionee may give written notice to the Company of any election to purchase some or all of the vested Shares purchasable at the time of such notice. Said notice shall specify the number of vested Shares to be purchased and shall be accompanied by payment therefor in cash, certified check, bank check or wire transfer, in U.S. funds, payable to the order of the Company in an amount equal to the purchase price of such Shares, or with the consent of the Board of Directors of the Company or a designated committee thereof (collectively, the "Board") (i) by delivery to the Company of

shares of its Common Stock (including shares of Common Stock to be acquired upon exercise of this Option in a "net exercise" of this Option) having a fair market value equal to the purchase price of such Shares, (ii) by delivery to the Company of a promissory note, in form and substance acceptable to the Board, in principal amount equal to the purchase price of such Shares, or (iii) any combination of the above.

The delivery of certificates representing the Option Shares will be contingent upon the Company's receipt from the Optionee of full payment for the Option Shares, as set forth above and any agreement, statement or other evidence that the Company may require to satisfy itself that the issuance of Stock to be purchased pursuant to the exercise of Options under the Plan and any subsequent resale of the shares of Stock will be in compliance with the applicable laws and regulations.

Certificates for the shares of Stock purchased upon exercise of this Stock Option shall be issued and delivered to the Optionee upon compliance, to the satisfaction of the Administrator, with all requirements under the applicable laws or regulations in connection with such issuance and with the requirements hereof and of the Plan. The determination of the Administrator as to such compliance shall be final and binding on the Optionee. The Optionee shall not be deemed to be the holder of, or to have any of the rights of a holder with respect to, any shares of Stock subject to this Stock Option unless and until this Stock Option shall have been exercised pursuant to the terms hereof, the Company shall have issued and delivered the shares to the Optionee, and the Optionee's name shall have been entered as the stockholder of record on the books of the Company. Thereupon, the Optionee shall have full voting, dividend and other ownership rights with respect to such shares of Stock.

The minimum number of shares with respect to which this Option may be exercised at any one time shall be 100 shares, unless the number of shares with respect to which this Option is being exercised is the total number of shares subject to exercise under this Option at the time.

3. Termination of Employment or Death of Optionee. The Option, as to any Shares not theretofore purchased, shall terminate on the earlier of the Expiration Date or 30 days after the Optionee is no longer employed by the Company or a Subsidiary (as defined in the Plan); provided, however, that if such termination of employment results from (i) the Optionee's death or disability, the Option may be exercised as to vested Shares as of the date of such termination of employment within three (3) months thereafter (but in no event later than the Expiration Date) by the Optionee's executors, administrators, personal representatives, or any person or persons to whom the Option may be transferred by will or by the laws of descent and distribution, but only to the extent that the Optionee was entitled to exercise the Option at the time of such termination of Optionee's employment or (ii) the Optionee's termination for Cause (as defined below), the Option (as to all vested and unvested Shares) shall immediately terminate and be of no further force or effect. The Option does not confer upon the Optionee any right with respect to continuation of employment by the Company, nor shall it interfere with any right of the Company to terminate such employment at any time or any employee's "employee-at-will" status.

"*Cause*" as such term relates to the termination of any person means the occurrence of one or more of the following: (i) such person is convicted of, pleads guilty to, or confesses to any felony or any act of fraud, misappropriation or embezzlement, (ii) such person engages in a

fraudulent act to the material damage or prejudice of the Company or any Subsidiary or in conduct or activities materially damaging to the property, business or reputation of the Company or any Subsidiary, (iii) any material act or omission by such person involving malfeasance or negligence in the performance of such person's duties to the Company or any Subsidiary to the material detriment of the Company or any Subsidiary, which has not been corrected by such person within 30 days after written notice from the Company of any such act or omission, (iv) failure by such person to comply in any material respect with the terms of his employment agreement, if any, or any written policies or directives of the Board, which has not been corrected by such person within 30 days after written notice from the Company of such failure, or (v) material breach by such person of his noncompetition agreement with the Company, if any.

4. Shares. The Shares that are the subject of the Option are shares of the Common Stock, $.01 par value, of the Company as constituted on the date of the Option, subject to adjustment as provided in Section 3 of the Plan.

5. Effect of Certain Transactions. If (i) the Company is merged into or consolidated with another corporation and the Company is not the surviving corporation, (ii) one or more corporations are merged into the Company which continues as the surviving corporation and the stockholders of the Company immediately prior to the transaction own less than a majority of its outstanding Common Stock immediately after the transaction, or shares of Common Stock of the Company are converted into cash, securities or property other than shares of Common Stock of the Company, or (iii) the Company is liquidated, dissolved, or sells or otherwise disposes of all or substantially all of its assets to another entity while any portion of the Option remains unexercised and unexpired, then in any of such transactions the Board may, in its sole discretion, take one or more of the following actions:

(a) The Compensation Committee of the Board (the "Committee") may cancel the Option as of the effective date of any such transaction, provided that notice of such cancellation shall be given to the Optionee at least 15 days prior to the effective date of such transaction, and the Optionee shall have the right to exercise so much of the Option as is exercisable during said 15-day period, including Options which become exercisable due to acceleration of vesting, if any, by the Board;

(b) The Committee may (i) cancel the Option as to unvested Shares as of the effective date of the transaction and (ii) provide for the repurchase of unexercised Options as to vested Shares as of the effective date of such transaction by the Company on the effective date of such transaction for the same cash, securities or other property received with respect to each outstanding Share in the transaction by the stockholders of the Company, less the exercise price of the Option;

(c) The Committee may provide for the voluntary exchange of the Option on the effective date of such transaction for an option or other rights granted by a successor corporation on terms reasonably acceptable to the Optionee; or

The Committee may provide that after the effective date of such transaction, the Optionee shall be entitled upon exercise of the Option as to any vested Shares to receive in lieu of each Share purchasable under the Option the same cash, securities or other property received with respect

each outstanding Share in the transaction by the stockholders of the Company.

Notwithstanding the foregoing provisions of this Agreement, the vesting of this Option shall accelerate and this Option shall be fully vested and exercisable with respect to all Shares upon (x) the sale, lease or other disposition of all or substantially all of the Company's assets or (y) the merger, consolidation or reorganization of the Company with another entity where the beneficial owners of the Company's outstanding capital stock immediately prior to such transaction hold less than fifty-one percent (51%) of the voting power of the outstanding capital stock of the surviving or combined entity immediately after such transaction and the termination of the Optionee if (i) such termination occurs within 24 months of (x) or (y) above and (ii) such termination is either by the Company, its subsidiaries or a successor entity without Cause or by the Optionee for Good Reason (as defined below).

For purposes of this Section 5, "Good Reason" shall mean that Optionee has complied with the "Good Reason Process" (hereinafter defined) following the occurrence of any of the following events: (A) a substantial diminution or other substantive adverse change, not consented to by Optionee, in the nature or scope of Optionee's responsibilities, authorities, powers, functions or duties; (B) an involuntary reduction in Optionee's annual base salary except for across-the-board reductions similarly affecting all or substantially all management employees; (C) a breach by the Company of any of its other material obligations under this Agreement and the failure of the Company to cure such breach within thirty (30) days after written notice thereof by Optionee; or (D) the involuntary relocation of the Company's offices at which Optionee is principally employed or the involuntary relocation of the offices of Optionee's primary workgroup to a location more than 30 miles from such offices, or the requirement by the Company that Optionee be based anywhere other than the Company's offices at such location on an extended basis, except for required travel on the Company's business to an extent substantially consistent with Optionee's business travel obligations. "Good Reason Process" shall mean that (i) Optionee reasonably determines in good faith that a "Good Reason" event has occurred; (ii) Optionee notifies the Company in writing of the occurrence of the Good Reason event; (iii) Optionee cooperates in good faith with the Company's efforts, for a period not less than ninety (90) days following such notice, to modify Optionee's employment situation in a manner acceptable to Optionee and Company; and (iv) notwithstanding such efforts, one or more of the Good Reason events continues to exist and has not been modified in a manner acceptable to Optionee. If the Company cures the Good Reason event in a manner acceptable to Optionee during the ninety (90) day period, Good Reason shall be deemed not to have occurred.

6. Status of the Option. This Option is intended to qualify as an "incentive stock option" under Section 422 of the Internal Revenue Code of 1986, as amended (the "Code"), but the Company does not represent or warrant that this Option qualifies as such. The Optionee should consult with his or her own tax advisors regarding the tax effects of this Option and the requirements necessary to obtain favorable income tax treatment under Section 422 of the Code, including, but not limited to, holding period requirements.

7. Transferability. This Agreement is personal to the Optionee, is non-assignable and is not transferable in any manner, by operation of law or otherwise, other than by will or the laws of descent and distribution. This Stock Option is exercisable, during the Optionees's lifetime, only by the Optioneee, and thereafter, only by the Optionee's legal representative or legatee.

8. Miscellaneous. Notices hereunder shall be mailed or delivered to the Company as principal place of business, 84 October Hill Road, Holliston, MA 01746 and shall be mailed or delivered to the Optionee at the address set forth below, or in either case at such other address as one party may subsequently furnish to the other party in writing.

Harvard Bioscience, Inc.

By: _____

Name: Bryce Chicoyne

Title: Chief Financial Officer

The foregoing Option is hereby acceptable and its terms and conditions are hereby agreed to.

_____

Dated: _____

_____

Address

_____

_____

Social Security Number

NONQUALIFIED STOCK OPTION TO PURCHASE SHARES OF COMMON
STOCK UNDER THE HARVARD BIOSCIENCE, INC.
2000 STOCK OPTION AND INCENTIVE PLAN

Shares

(Option Issuance Date)

Pursuant to the Harvard Bioscience, Inc. 2000 Stock Option and Incentive Plan (the "Plan"), Harvard Bioscience, Inc., a Delaware corporation (including its successors, the "Company"), hereby grants to (the "Optionee") an option to purchase (the "Option") prior to the tenth (10th) anniversary of the date hereof (the "Expiration Date"), at an exercise price per share of **$** all or any of shares of Common Stock, $.01 par value, of the Company (the "Shares"), subject to the terms and conditions set forth herein and in the Plan (the "Agreement"). This Option is intended to be a Nonqualified Stock Option granted under the Plan.

1. Vesting Schedule. No portion of this Option may be exercised until such portion shall have vested. Except as set forth below and subject to the terms and conditions set forth below, this Option shall be vested and exercisable with respect to the following number of Shares on the dates indicated:

Cumulative Number of Shares Exercisable	**Vesting Date**
(25%)	
(50%)	
(75%)	
(100%)	

Once vested, this Stock Option shall continue to be exercisable at any time or times prior to the close of business on the Expiration Date, subject to the provisions hereof and of the Plan.

2. Manner of Exercise. The Optionee may exercise the Option only in the following manner: From time to time prior to the Expiration Date, the Optionee may give written notice to the Company of any election to purchase some or all of the vested Shares purchasable at the time of such notice. Said notice shall specify the number of vested Shares to be purchased and shall be accompanied by payment therefor in cash, certified check, bank check or wire transfer, in U.S. funds, payable to the order of the Company in an amount equal to the purchase

price of such Shares, or with the consent of the Board of Directors of the Company or a designated committee thereof (collectively, the "Board") (i) by delivery to the Company of shares of its Common Stock (including shares of Common Stock to be acquired upon exercise of this Option in a "net exercise" of this Option) having a fair market value equal to the purchase price of such Shares, (ii) by delivery to the Company of a promissory note, in form and substance acceptable to the Board, in principal amount equal to the purchase price of such Shares, or (iii) any combination of the above.

The delivery of certificates representing the Option Shares will be contingent upon the Company's receipt from the Optionee of full payment for the Option Shares, as set forth above and any agreement, statement or other evidence that the Company may require to satisfy itself that the issuance of Stock to be purchased pursuant to the exercise of Options under the Plan and any subsequent resale of the shares of Stock will be in compliance with the applicable laws and regulations.

Certificates for the shares of Stock purchased upon exercise of this Stock Option shall be issued and delivered to the Optionee upon compliance, to the satisfaction of the Administrator, with all requirements under the applicable laws or regulations in connection with such issuance and with the requirements hereof and of the Plan. The determination of the Administrator as to such compliance shall be final and binding on the Optionee. The Optionee shall not be deemed to be the holder of, or to have any of the rights of a holder with respect to, any shares of Stock subject to this Stock Option unless and until this Stock Option shall have been exercised pursuant to the terms hereof, the Company shall have issued and delivered the shares to the Optionee, and the Optionee's name shall have been entered as the stockholder of record on the books of the Company. Thereupon, the Optionee shall have full voting, dividend and other ownership rights with respect to such shares of Stock.

The minimum number of shares with respect to which this Option may be exercised at any one time shall be 100 shares, unless the number of shares with respect to which this Option is being exercised is the total number of shares subject to exercise under this Option at the time.

3. Termination of Employment or Death of Optionee. The Option, as to any Shares not theretofore purchased, shall terminate on the earlier of the Expiration Date or 30 days after the Optionee is no longer employed by the Company or a Subsidiary (as defined in the Plan); provided, however, that if such termination of employment results from (i) the Optionee's death or disability, the Option may be exercised as to vested Shares as of the date of such termination of employment within three (3) months thereafter (but in no event later than the Expiration Date) by the Optionee's executors, administrators, personal representatives, or any person or persons to whom the Option may be transferred by will or by the laws of descent and distribution, but only to the extent that the Optionee was entitled to exercise the Option at the time of such termination of Optionee's employment or (ii) the Optionee's termination for Cause (as defined below), the Option (as to all vested and unvested Shares) shall immediately terminate and be of no further force or effect. The Option does not confer upon the Optionee any right with respect to continuation of employment by the Company, nor shall it interfere with any right of the Company to terminate such employment at any time or any employee's "employee-at-will" status.

"*Cause*" as such term relates to the termination of any person means the occurrence of one or more of the following: (i) such person is convicted of, pleads guilty to, or confesses to any felony or any act of fraud, misappropriation or embezzlement, (ii) such person engages in a fraudulent act to the material damage or prejudice of the Company or any Subsidiary or in conduct or activities materially damaging to the property, business or reputation of the Company or any Subsidiary, (iii) any material act or omission by such person involving malfeasance or negligence in the performance of such person's duties to the Company or any Subsidiary to the material detriment of the Company or any Subsidiary, which has not been corrected by such person within 30 days after written notice from the Company of any such act or omission, (iv) failure by such person to comply in any material respect with the terms of his employment agreement, if any, or any written policies or directives of the Board, which has not been corrected by such person within 30 days after written notice from the Company of such failure, or (v) material breach by such person of his noncompetition agreement with the Company, if any.

4. Shares. The Shares that are the subject of the Option are shares of the Common Stock, $.01 par value, of the Company as constituted on the date of the Option, subject to adjustment as provided in Section 3 of the Plan.

5. Effect of Certain Transactions. If (i) the Company is merged into or consolidated with another corporation and the Company is not the surviving corporation, (ii) one or more corporations are merged into the Company which continues as the surviving corporation and the stockholders of the Company immediately prior to the transaction own less than a majority of its outstanding Common Stock immediately after the transaction, or shares of Common Stock of the Company are converted into cash, securities or property other than shares of Common Stock of the Company, or (iii) the Company is liquidated, dissolved, or sells or otherwise disposes of all or substantially all of its assets to another entity while any portion of the Option remains unexercised and unexpired, then in any of such transactions the Board may, in its sole discretion, take one or more of the following actions:

(a) The Compensation Committee of the Board (the "Committee") may cancel the Option as of the effective date of any such transaction, provided that notice of such cancellation shall be given to the Optionee at least 15 days prior to the effective date of such transaction, and the Optionee shall have the right to exercise so much of the Option as is exercisable during said 15-day period, including Options which become exercisable due to acceleration of vesting, if any, by the Board;

(b) The Committee may (i) cancel the Option as to unvested Shares as of the effective date of the transaction and (ii) provide for the repurchase of unexercised Options as to vested Shares as of the effective date of such transaction by the Company on the effective date of such transaction for the same cash, securities or other property received with respect to each outstanding Share in the transaction by the stockholders of the Company, less the exercise price of the Option;

(c) The Committee may provide for the voluntary exchange of the Option on the effective date of such transaction for an option or other rights granted by a successor corporation on terms reasonably acceptable to the Optionee; or

(d) The Committee may provide that after the effective date of such transaction, the Optionee shall be entitled upon exercise of the Option as to any vested Shares to receive in lieu of each Share purchasable under the Option the same cash, securities or other property received with respect each outstanding Share in the transaction by the stockholders of the Company.

Notwithstanding the foregoing provisions of this Agreement, the vesting of this Option shall accelerate and this Option shall be fully vested and exercisable with respect to all Shares upon (x) the sale, lease or other disposition of all or substantially all of the Company's assets or (y) the merger, consolidation or reorganization of the Company with another entity where the beneficial owners of the Company's outstanding capital stock immediately prior to such transaction hold less than fifty-one percent (51%) of the voting power of the outstanding capital stock of the surviving or combined entity immediately after such transaction. and the termination of the Optionee if (i) such termination occurs within 24 months of (x) or (y) above and (ii) such termination is either by the Company, its subsidiaries or a successor entity without Cause or by the Optionee for Good Reason (as defined below).

For purposes of this Section 5, "Good Reason" shall mean that Optionee has complied with the "Good Reason Process" (hereinafter defined) following the occurrence of any of the following events: (A) a substantial diminution or other substantive adverse change, not consented to by Optionee, in the nature or scope of Optionee's responsibilities, authorities, powers, functions or duties; (B) an involuntary reduction in Optionee's annual base salary except for across-the-board reductions similarly affecting all or substantially all management employees; (C) a breach by the Company of any of its other material obligations under this Agreement and the failure of the Company to cure such breach within thirty (30) days after written notice thereof by Optionee; or (D) the involuntary relocation of the Company's offices at which Optionee is principally employed or the involuntary relocation of the offices of Optionee's primary workgroup to a location more than 30 miles from such offices, or the requirement by the Company that Optionee be based anywhere other than the Company's offices at such location on an extended basis, except for required travel on the Company's business to an extent substantially consistent with Optionee's business travel obligations. "Good Reason Process" shall mean that (i) Optionee reasonably determines in good faith that a "Good Reason" event has occurred; (ii) Optionee notifies the Company in writing of the occurrence of the Good Reason event; (iii) Optionee cooperates in good faith with the Company's efforts, for a period not less than ninety (90) days following such notice, to modify Optionee's employment situation in a manner acceptable to Optionee and Company; and (iv) notwithstanding such efforts, one or more of the Good Reason events continues to exist and has not been modified in a manner acceptable to Optionee. If the Company cures the Good Reason event in a manner acceptable to Optionee during the ninety (90) day period, Good Reason shall be deemed not to have occurred.

6. Transferability. This Agreement is personal to the Optionee, is non-assignable and is not transferable in any manner, by operation of law or otherwise, other than by will or the laws of descent and distribution. This Stock Option is exercisable, during the Optionees's lifetime, only by the Optioneee, and thereafter, only by the Optionee's legal representative or legatee.

7. Miscellaneous. Notices hereunder shall be mailed or delivered to the Company's principal place of business, 84 October Hill Rd., Holliston, MA 01746 and shall be mailed or delivered to the Optionee at the address set forth below, or in either

case at such other address as one party may subsequently furnish to the other party in writing.

Harvard Bioscience, Inc.

By _____
Name: Bryce Chicoyne
Title: Chief Financial Officer

The foregoing Option is hereby acceptable and its terms and conditions are hereby agreed to.

_____

Dated: _____

_____
Address

_____
Social Security Number

NON-QUALIFIED STOCK OPTION AGREEMENT
FOR NON-EMPLOYEE DIRECTORS

UNDER THE HARVARD BIOSCIENCE, INC.
2000 STOCK OPTION AND INCENTIVE PLAN

Name of Optionee:

No. of Option Shares:

Option Exercise Price per Share:

Grant Date:

Expiration Date:

Pursuant to the Harvard Bioscience, Inc., 2000 Stock Option and Incentive Plan (the "Plan") as amended through the date hereof, Harvard Bioscience, Inc., (the "Company") hereby grants to the Optionee named above, who is a Director of the Company but is not an employee of the Company, an option (the "Stock Option") to purchase on or prior to the Expiration Date specified above all or part of the number of shares of Common Stock, par value $.01 per share (the "Stock") of the Company specified above at the Option Exercise Price per Share specified above subject to the terms and conditions set forth herein and in the Plan.

1. Vesting. No portion of this Stock Option may be exercised until this Stock Option shall have vested. Except as set forth below, this Stock Option shall be vested and exercisable as to shares on the first anniversary of the Grant Date, vested and exercisable as to shares on the second anniversary of the Grant Date and vested and exercisable as to shares on the third anniversary of the Grant Date.

In the event of the termination of the Optionee's service as a director of the Company because of Disability (as defined below) or death, this Stock Option shall become immediately vested and exercisable in full, whether or not vested and exercisable at such time. Once vested, this Stock Option shall continue to be exercisable at any time or times prior to the close of business on the Expiration Date, subject to the provisions hereof and of the Plan. The term "Disability" shall mean that condition described in Section 22(e)(3) of the Internal Revenue Code of 1986, as amended (the "Code"). In the event of a dispute, the determination of Disability will be made by the Administrator (as defined in Section 2(a) of the Plan) in good faith and with the advice of a physician competent in the area to which such Disability relates.

2. Exercise of Stock Option.

(a) The Optionee exercise this Option only in the following manner: from time to time on or prior to the Expiration Date of this Option, the Optionee may give written

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notice to the Company of his or her election to purchase some or all of the vested Option Shares purchasable at the time of such notice. This notice shall specify the number of Option Shares to be purchased.

Payment of the purchase price for the Option Shares may be made by one or more of the following methods: (i) in cash, by certified or bank check or other instrument acceptable to the Administrator; (ii) in the form of shares of Stock that are not then subject to restrictions under any Company plan and that have been held by the Optionee for at least six months; (iii) by the Optionee delivering to the Company a properly executed exercise notice together with irrevocable instructions to a broker to promptly deliver to the Company cash or a check payable and acceptable to the Company to pay the option purchase price, provided that in the event the Optionee chooses to pay the option purchase price as so provided, the Optionee and the broker shall comply with such procedures and enter into such agreements of indemnity and other agreements as the Administrator shall prescribe as a condition of such payment procedure; or (iv) a combination of (i), (ii) and (iii) above. Payment instruments will be received subject to collection.

The delivery of certificates representing the Option Shares will be contingent upon the Company's receipt from the Optionee of full payment for the Option Shares, as set forth above and any agreement, statement or other evidence that the Company may require to satisfy itself that the issuance of Stock to be purchased pursuant to the exercise of Options under the Plan and any subsequent resale of the shares of Stock will be in compliance with applicable laws and regulations.

(b) Certificates for shares of Stock purchased upon exercise of this Stock Option shall be issued and delivered to the Optionee upon compliance to the satisfaction of the Administrator with all requirements under applicable laws or regulations in connection with such issuance and with the requirements hereof and of the Plan. The determination of the Administrator as to such compliance shall be final and binding on the Optionee. The Optionee shall not be deemed to be the holder of the shares subject to this Stock Option, or to have any of the rights of a holder, unless and until this Stock Option shall have been exercised pursuant to the terms hereof, the Company shall have issued and delivered the shares to the Optionee, and the Optionee's name shall have been entered as the stockholder of record on the books of the Company. Thereupon, the Optionee shall have full voting, dividend and other ownership rights with respect to such shares of Stock.

(c) Notwithstanding any other provision hereof or of the Plan, no portion of this Stock Option shall be exercisable after the Expiration Date hereof.

3. Termination as Director. If the Optionee ceases to be a Director of the Company, the period within which to exercise the Stock Option may be subject to earlier termination as set forth below.

(a) Termination by Reason of Death. If the Optionee ceases to be a Director by reason of death, any Stock Option held by the Optionee may be exercised by his or her legal representative or legatee for a period of twelve (12) months from the date of death or until the Expiration Date, if earlier.

(b) Other Termination. If the Optionee ceases to be a Director for any reason other than Cause (as defined below) or death, any Stock Option held by the Optionee may be exercised for a period of three (3) months from the date of termination or until the Expiration Date, if earlier. The term "Cause" shall mean a vote of the Board resolving that the Optionee should be dismissed as a result of: (i) the commission of any act by the Optionee constituting financial dishonesty against the Company (which act would be chargeable as a crime under applicable law); (ii) the Optionee's engaging in any other act or dishonesty, fraud, intentional misrepresentation, moral turpitude, illegality or harassment which, as determined in good faith by the Board, would (A) materially adversely affect the business or the reputation of the Company with its current or prospective customers, suppliers, lenders and/or other third parties whom it does or might do business, or (B) expose the Company to a risk of civil or criminal legal damages, liabilities or penalties; (iii) the repeated failure by the Optionee to follow the directives of the Board; or (iv) any material misconduct, violation of the Company's policies, or willful and deliberate non-performance of duty by the Optionee in connection with the business affairs of the Company.

4. Incorporation of Plan. Notwithstanding anything herein to the contrary, this Stock Option shall be subject to and governed by all the terms and conditions of the Plan. Capitalized terms in this Agreement shall have the meaning specified in the Plan, unless a different meaning is specified herein.

5. Transferability. This Agreement is personal to the Optionee, is non-assignable and is not transferable in any manner, by operation of law or otherwise, other than by will or the laws of descent and distribution. This Stock Option is exercisable, during the Optionee's lifetime, only the Optionee, and thereafter, only by the Optionee's legal representative or legatee.

6. Miscellaneous

(a) Notice hereunder shall be given to the Company at its principal place of business, and shall be given to the Optionee at the address set forth below, or in either case at such other address as one party subsequently furnish to the other party in writing.

(b) This Stock Option does not confer upon the Optionee any rights with respect to continuance as a Director.

(c) Pursuant to Section 15 of the Plan, the Administrator may at any time amend or cancel any outstanding portion of this Stock Option, but no such action may be taken which adversely affects the Optionee's rights under this Agreement without the Optionee's consent.

HARVARD BIOSCIENCE, INC.

By: _____
Name: Bryce Chicoyne
Title: Chief Financial Officer

The foregoing Agreement is hereby accepted and the terms and conditions thereof hereby agreed to by the undersigned.

Dated: _____

_____
Optionee's Signature

Optionee's name and address:

_____
_____
_____

EXHIBIT 31.1

Certification

I, Bryce Chicoyne, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Harvard Bioscience, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the consolidated financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:

a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b. [Omitted pursuant to SEC Release Nos. 33-8238 and 34-47986];

c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 9, 2004

/s/ Bryce Chicoyne
Bryce Chicoyne
Chief Financial Officer

EXHIBIT 31.2

Certification

I, Chane Graziano, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Harvard Bioscience, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the consolidated financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:

a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b. [Omitted pursuant to SEC Release Nos. 33-8238 and 34-47986];

c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonable likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 9, 2004

/s/ Chane Graziano
Chane Graziano
Chief Executive Officer

EXHIBIT 32.1

CERTIFICATION OF PERIODIC FINANCIAL REPORT
PURSUANT TO 18 U.S.C. SECTION 1350

The undersigned officer of Harvard Bioscience, Inc. (the "Company") hereby certifies that the Company's quarterly report on Form 10-Q for the quarterly period ended September 30, 2004 to which this certification is being furnished as an exhibit (the "Report"), as filed with the Securities and Exchange Commission on the date hereof, fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company. This certification is provided solely pursuant to 18 U.S.C. Section 1350 and Item 601(b)(32) of Regulation S-K ("Item 601(b)(32)") promulgated under the Securities Act of 1933, as amended (the "Securities Act"), and the Exchange Act. In accordance with clause (ii) of Item 601(b)(32), this certification (A) shall not be deemed "filed" for purposes of Section 18 of the Exchange Act, or otherwise subject to the liability of that section, and (B) shall not be deemed to be incorporated by reference into any filing under the Securities Act or the Exchange Act, except to the extent that the Company specifically incorporates it by reference.

Date: November 9, 2004

/s/ Bryce Chicoyne
Name: Bryce Chicoyne
Title: Chief Financial Officer

EXHIBIT 32.2

CERTIFICATION OF PERIODIC FINANCIAL REPORT
PURSUANT TO 18 U.S.C. SECTION 1350

The undersigned officer of Harvard Bioscience, Inc. (the "Company") hereby certifies that the Company's quarterly report on Form 10-Q for the quarterly period ended September 30, 2004 to which this certification is being furnished as an exhibit (the "Report"), as filed with the Securities and Exchange Commission on the date hereof, fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company. This certification is provided solely pursuant to 18 U.S.C. Section 1350 and Item 601(b)(32) of Regulation S-K ("Item 601(b)(32)") promulgated under the Securities Act of 1933, as amended (the "Securities Act"), and the Exchange Act. In accordance with clause (ii) of Item 601(b)(32), this certification (A) shall not be deemed "filed" for purposes of Section 18 of the Exchange Act, or otherwise subject to the liability of that section, and (B) shall not be deemed to be incorporated by reference into any filing under the Securities Act or the Exchange Act, except to the extent that the Company specifically incorporates it by reference.

Date: November 9, 2004

/s/ Chane Graziano
Name: Chane Graziano
Title: Chief Executive Officer