

**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 June 30, 2005

**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**  
(State or Other Jurisdiction of  
Incorporation or Organization)

**(508) 893-8999**  
(Registrant's telephone number,  
including area code)

**04-3306140**  
(IRS Employer  
Identification No.)

**84 October Hill Road, Holliston, MA**  
(Address of Principal Executive Offices)

**01746**  
(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.  YES  NO

Indicate by check mark whether the registrant is an accelerated filer (as defined in Exchange Act Rule 12b-2).  YES  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 August 1, 2005 there were 30,461,859 shares of Common Stock, par value \$0.01 per share, outstanding.

**HARVARD BIOSCIENCE, INC.**

Form 10-Q

For the Quarter Ended June 30, 2005

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**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)

<b>Assets</b>	<b>June 30, 2005</b>	<b>December 31, 2004</b>
<b>Current assets:</b>		
Cash and cash equivalents	\$ 13,245	\$ 13,867
Accounts receivable, net of allowance for doubtful accounts of \$1,252 and \$853, respectively	14,641	18,519
Inventories	20,660	25,465
Deferred income tax assets	485	495
Other receivables and other assets	2,714	2,963
Total current assets	<u>51,745</u>	<u>61,309</u>
Property, plant and equipment, net	6,213	7,143
Deferred tax income assets	—	810
Amortizable intangible assets, net	17,097	27,403
Goodwill and other indefinite lived intangible assets	31,867	42,535
Other assets	557	681
Total assets	<u>\$ 107,479</u>	<u>\$ 139,881</u>
<b>Liabilities and Stockholders' Equity</b>		
<b>Current liabilities:</b>		
Current installments of long-term debt	\$ 27	\$ 20
Accounts payable	5,474	6,251
Deferred revenue	2,142	2,159
Accrued income taxes payable	3,979	1,886
Accrued expenses	4,177	4,802
Other liabilities	718	946
Total current liabilities	<u>16,517</u>	<u>16,064</u>
Long-term debt, less current installments	15,200	16,520
Deferred income tax liabilities	569	1,507
Other liabilities	953	1,433
Total liabilities	<u>33,239</u>	<u>35,524</u>
<b>Commitments and contingencies</b>		
<b>Stockholders' equity:</b>		
Preferred stock, par value \$0.01 per share, 5,000,000 shares authorized	—	—
Common stock, par value \$0.01 per share, 80,000,000 shares authorized; 35,120,505 and 35,052,449 shares issued and 30,459,721 and 30,391,665 shares outstanding, respectively	351	351
Additional paid-in-capital	173,636	173,469
Accumulated deficit	(103,439)	(76,262)
Accumulated other comprehensive income	4,360	7,467
Treasury stock, 4,660,784 common shares, at cost	(668)	(668)
Total stockholders' equity	<u>74,240</u>	<u>104,357</u>
Total liabilities and stockholders' equity	<u>\$ 107,479</u>	<u>\$ 139,881</u>

See accompanying notes to unaudited consolidated financial statements.

**HARVARD BIOSCIENCE, INC. AND SUBSIDIARIES**  
**CONSOLIDATED STATEMENTS OF OPERATIONS**  
(unaudited, in thousands, except per share amounts)

	<b>Three Months Ended June 30,</b>		<b>Six Months Ended June 30,</b>	
	<b>2005</b>	<b>2004</b>	<b>2005</b>	<b>2004</b>
Product revenues	\$ 21,616	\$ 22,108	\$ 43,820	\$ 43,990
Research revenues	108	352	339	635
Total revenues	<u>21,724</u>	<u>22,460</u>	<u>44,159</u>	<u>44,625</u>

Costs and expenses:

Cost of product revenues(1)	14,859	11,178	26,248	22,766
Sales and marketing expenses(1)	4,346	4,288	8,772	8,586
General and administrative expenses(1)	4,299	3,394	7,630	6,654
Research and development expenses(1)	1,615	1,747	3,502	3,416
Asset abandonments and impairments	17,923	—	17,923	—
Restructuring expenses	967	157	967	421
Amortization of intangible assets	892	1,089	1,788	2,012
Total costs and expenses	<u>44,901</u>	<u>21,853</u>	<u>66,830</u>	<u>43,855</u>

Operating income (loss)	<u>(23,177)</u>	<u>607</u>	<u>(22,671)</u>	<u>770</u>
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Other income (expense):

Foreign currency loss	(179)	(26)	(327)	(168)
Interest expense	(232)	(191)	(491)	(378)
Interest income	53	44	119	106
Other, net	7	(18)	167	(65)

Other income (expense), net	<u>(351)</u>	<u>(191)</u>	<u>(532)</u>	<u>(505)</u>
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Income (loss) before income taxes	(23,528)	416	(23,203)	265
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Income tax expense	(3,851)	(118)	(3,974)	(18)
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Net income (loss)	<u>\$ (27,379)</u>	<u>\$ 298</u>	<u>\$ (27,177)</u>	<u>\$ 247</u>
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Income (loss) per share:

Basic	<u>\$ (0.90)</u>	<u>\$ 0.01</u>	<u>\$ (0.89)</u>	<u>\$ 0.01</u>
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Diluted	<u>\$ (0.90)</u>	<u>\$ 0.01</u>	<u>\$ (0.89)</u>	<u>\$ 0.01</u>
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Weighted average common shares:

Basic	<u>30,432</u>	<u>30,243</u>	<u>30,423</u>	<u>30,203</u>
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Diluted	<u>30,432</u>	<u>31,163</u>	<u>30,423</u>	<u>31,367</u>
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(1) Components of stock compensation expense:

Cost of product revenues	\$ —	\$ 15	\$ —	\$ 59
General and administrative expense	—	9	—	10
Sales and marketing expense	—	13	—	14
Total	<u>\$ —</u>	<u>\$ 37</u>	<u>\$ —</u>	<u>\$ 83</u>

See accompanying notes to unaudited consolidated financial statements.

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

	Six Months Ended June 30,	
	2005	2004
Cash flows from operating activities:		
Net income (loss)	\$ (27,177)	\$ 247
Adjustments to reconcile net income to net cash provided by operating activities:		
Stock compensation expense	—	83
Depreciation	1,311	1,222
Abandonment and impairment of assets	17,923	—
Restructuring charges	3,685	—
Amortization of catalog costs	94	58
Loss (gain) on sale of property, plant and equipment	25	(3)
Amortization of intangible assets	1,788	2,012
Amortization of deferred financing costs	54	54
Deferred income taxes	(52)	(89)
Changes in operating assets and liabilities, net of effects of business acquisitions:		
Change in accounts receivable	3,258	3,028
Change in inventories	239	(529)
Change in other receivables and other assets	84	(106)
Change in trade accounts payable	(487)	(1,391)
Change in accrued income taxes payable	2,209	(715)
Change in accrued expenses	(780)	494
Change in deferred revenue	50	594
Change in other liabilities	(424)	46
Net cash provided by operating activities	<u>1,800</u>	<u>5,005</u>
Cash flows from investing activities:		
Additions to property, plant and equipment	(733)	(1,023)
Additions to catalog costs	(2)	(351)
Proceeds from sales of fixed assets	28	13

Acquisition of businesses, net of cash acquired	—	(6,776)
Net cash used in investing activities	(707)	(8,137)
<b>Cash flows from financing activities:</b>		
Net proceeds from long-term debt	—	6,950
Repayments of long-term debt	(1,312)	(1,994)
Net proceeds from issuance of common stock	167	539
Net cash provided by (used in) financing activities	(1,145)	5,495
Effect of exchange rate changes on cash	(570)	(71)
Increase (decrease) in cash and cash equivalents	(622)	2,292
Cash and cash equivalents at the beginning of period	13,867	8,223
Cash and cash equivalents at the end of period	<u>\$ 13,245</u>	<u>\$ 10,515</u>
<b>Supplemental disclosures of cash flow information:</b>		
Cash paid for interest	\$ 489	\$ 336
Cash paid for income taxes	\$ 1,748	\$ 839

See accompanying notes to unaudited consolidated financial statements.

**HARVARD BIOSCIENCE, INC. AND SUBSIDIARIES**  
**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 June 30, 2005 and for the three and six months ended June 30, 2005 and 2004 have 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, 2004, 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/A for the fiscal year ended December 31, 2004.

In the opinion of management, all adjustments, which include normal recurring adjustments necessary to present a fair statement of financial position as of June 30, 2005, and results of operations and cash flows for the three and six months ended June 30, 2005 and 2004, as applicable, have been made. The results of operations for the three and six months ended June 30, 2005 are not necessarily indicative of the operating results for the full fiscal year or any future periods.

During the quarter ended June 30, 2005, the Company realigned its lines of business for financial reporting purposes into two business segments, the Apparatus and Instrumentation Business Segment and the Capital Equipment Business Segment. The Company had previously been arranged in a single segment for financial reporting purposes. See note 11 Segment Information.

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/A for the year ended December 31, 2004, filed with the SEC.

**2. Recently Issued Accounting Pronouncements**

In November 2004, Statement of Financial Accounting Standards (“SFAS”) No. 151, *Inventory Costs: an Amendment of ARB No. 43, Chapter 4*, was issued. SFAS No. 151 clarifies the accounting for abnormal amounts of idle facility expense, freight, handling costs and wasted material by requiring those items to be recognized as current-period charges. The Statement is effective for fiscal years beginning after June 15, 2005. The Company does not believe that adoption of this Statement will have a material impact on its consolidated results of operations or financial position.

In December 2004, SFAS No. 123R, *Share-Based Payments, a revision of SFAS No. 123, Accounting for Stock-Based Compensation*, was issued. SFAS No. 123R addresses financial accounting and reporting for costs associated with stock-based compensation. SFAS No. 123R will require the Company to recognize compensation expense in an amount equal to the fair value of share-based payments related to unvested

share-based awards over the applicable vesting period. The Statement is effective for annual periods beginning after June 15, 2005. The Company is currently evaluating the impact that the adoption of this Statement will have on its consolidated results of operations and financial position.

**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, *Accounting for Stock Issued to Employees*, and related interpretations in accounting for its stock option 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, *Accounting for Stock-Based Compensation*, net income and earnings per share would have been changed to the pro forma amounts indicated below:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2005	2004	2005	2004
	(in thousands, except per share data)			
Net income (loss), as reported	\$ (27,379)	\$ 298	\$ (27,177)	\$ 247
Add: stock-based employee compensation expense included in reported net income, net of tax	—	37	—	83
Deduct: total stock-based employee compensation expense determined under fair-value based method for all awards, net of tax	(895)	(1,493)	(1,697)	(2,381)
Pro forma net income (loss)	<u>\$ (28,274)</u>	<u>\$ (1,158)</u>	<u>\$ (28,874)</u>	<u>\$ (2,051)</u>
Earnings (loss) per share:				
Basic—as reported	\$ (0.90)	\$ 0.01	\$ (0.89)	\$ 0.01
Basic—pro forma	<u>\$ (0.93)</u>	<u>\$ (0.04)</u>	<u>\$ (0.95)</u>	<u>\$ (0.07)</u>
Diluted—as reported	\$ (0.90)	\$ 0.01	\$ (0.89)	\$ 0.01
Diluted—pro forma	<u>\$ (0.93)</u>	<u>\$ (0.04)</u>	<u>\$ (0.95)</u>	<u>\$ (0.07)</u>

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. Goodwill and Other Intangible Assets

During the second quarter of 2005, the asset groups that comprise the Company's Capital Equipment Business Segment, experienced a significant decrease in revenues and operating profit margins. As a result, with the assistance of third party independent appraisers the Company re-evaluated the long-lived assets associated with these asset groups in accordance with SFAS No. 144, *Accounting for Impairments or Disposal of Long-Lived Assets* and determined that certain intangible assets within these asset groups were impaired as of June 30, 2005. The Company recorded abandonment and impairment charges within the Capital Equipment Business Segment totaling approximately \$8.0 million for long-lived assets during the second quarter of 2005.

Also, as a result of the significant decrease in revenues and operating profit margins experienced by the Capital Equipment Business Segment during the second quarter, in accordance with SFAS No. 142, *Goodwill and Other Intangible Assets*, the Company, with the assistance of third party independent appraisers, re-evaluated the goodwill associated with the Genomic Solutions and Union Biometrica reporting units for impairment as of June 30, 2005. As a result of this goodwill impairment testing, the Company recorded impairment charges within the Capital Equipment Business Segment of approximately \$9.9 million for goodwill during the second quarter of 2005.

Intangible assets consist of the following:

	As of June 30, 2005		As of December 31, 2004		Weighted Average Life (a)
	Gross	Accumulated Amortization	Gross	Accumulated Amortization	
	(in thousands)				
Amortizable intangible assets:					
Existing technology	\$ 15,649	\$ (2,993)	\$ 29,631	\$ (7,584)	9.1 years
Tradename	920	(342)	1,680	(493)	9.5 years
Distribution agreement/customer relationships	4,753	(896)	4,753	(591)	7.9 years
Patents	9	(3)	9	(2)	10.8 years
Total amortizable intangible assets	<u>\$ 21,331</u>	<u>\$ (4,234)</u>	<u>\$ 36,073</u>	<u>\$ (8,670)</u>	
Non-amortizable intangible assets:					
Goodwill	\$ 30,463		\$ 41,083		
Other indefinite lived intangible assets	1,404		1,452		
Total goodwill and other indefinite lived intangible assets	<u>\$ 31,867</u>		<u>\$ 42,535</u>		
Total intangible assets	<u>\$ 53,198</u>		<u>\$ 78,608</u>		

(a) Weighted average life is as of June 30, 2005

The change in the carrying amount of goodwill for the six months ended June 30, 2005 is as follows (in thousands):

#### Goodwill rollforward

Balance at December 31, 2004	\$ 41,083
Impairments.	\$ (9,899)
Effect of change in foreign currencies	(721)
Balance at June 30, 2005	<u>\$ 30,463</u>

Intangible asset amortization expense for the three months ended June 30, 2005 and 2004 was \$0.9 million and \$1.1 million, respectively. Intangible asset amortization expense for the six months ended June 30, 2005 and 2004 was \$1.8 million and \$2.0 million, respectively. Amortization expense of existing amortizable intangible assets is estimated to be \$2.8 million for the year ending December 31, 2005, \$2.2 million for the years ending December 31, 2006 and 2007, \$2.1 million for the year ending December 31, 2008, \$1.8 million for the year ending December 31, 2009, and \$1.7 million for the year ended December 31, 2010.

## 5. 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:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2005	2004	2005	2004
	(in thousands)			
Basic	30,432	30,243	30,423	30,203
Effect of assumed conversion of employee stock options	—	920	—	1,164
Diluted	<u>30,432</u>	<u>31,163</u>	<u>30,423</u>	<u>31,367</u>

Excluded from the shares used in calculating the diluted earnings per common share in the above table are options to purchase approximately 4.0 million shares of common stock for the three and six months ended June 30, 2005, as the impact of these shares would be anti-dilutive. Excluded from the shares used in calculating the diluted earnings per common share in the above table are options to purchase approximately 2.2 million shares of common stock for the three and six months ended June 30, 2004, as the impact of these shares would be anti-dilutive.

## 6. Inventories

Inventories consist of the following:

	June 30, 2005	December 31, 2004
	(in thousands)	
Finished goods	\$ 6,976	\$ 9,390
Work in process	3,172	3,746
Raw materials	10,512	12,329
	<u>\$ 20,660</u>	<u>\$ 25,465</u>

## 7. Restructuring and Other Exit Costs

During 2004, the Company announced restructuring activities at its Genomic Solutions subsidiary related to the closure of a manufacturing facility and realignment of its cost structure. Total restructuring charges for 2004 were approximately \$0.4 million. During 2005, the Company reviewed and modified this plan to include the closure of another manufacturing facility and to discontinue certain product lines due to product rationalization decisions made during the second quarter. Total restructuring charges during the six months ended June 30, 2005 for the Genomic Solutions subsidiary were \$4.0 million. These charges related primarily to the write-off of inventory for rationalized products of \$3.5 million, severance costs of \$0.2 million, facility closure costs of \$0.2 million and other costs of \$0.1 million. The remaining \$0.5 million of restructuring charges recorded during the second quarter of 2005 were related to a decision to consolidate our Union Biometrica US manufacturing facility into our Holliston, MA facility (approximately \$0.2 million) and the realignment of personnel at our Biochrom, Scie-Plas and Hoefer subsidiaries (approximately \$0.3 million).

The cost of sales component of the 2005 restructuring charges was approximately \$3.5 million and related to the write-off of certain inventory in the Capital Equipment Business Segment. The remaining \$1.0 million related to severance and other facility closure costs.

Restructuring charges are as follows:

	Severance and related	Inventory	Facility Closure Costs	Other	Total
	(in thousands)				
Restructuring charges	\$ 483	\$ 3,535	\$ 287	\$ 197	\$ 4,502
Cash payments	(400)	0	(48)	(77)	(525)
Non-cash charges	0	(3,535)	(30)	(120)	(3,685)
June 30, 2005 accrual balance	<u>\$ 83</u>	<u>\$ —</u>	<u>\$ 209</u>	<u>\$ —</u>	<u>\$ 292</u>

## 8. Income Taxes

The amount recorded as gross deferred tax assets as of June 30, 2005 represents the amount of tax benefits of existing deductible temporary differences or carryforwards that are more likely than not to be realized through the generation of sufficient future taxable income within the carryforward period. Management reviews the recoverability of deferred tax assets during each reporting period.

The total valuation allowance for deferred tax assets as of June 30, 2005 was \$14.0 million of which \$4.2 million was charged against income tax expense while \$9.8 million was charged against acquisition-goodwill and intangible assets. The total valuation allowance increased by \$3.5 million from December 31, 2004 due to the Company's determination that a portion of the gross deferred tax assets do not meet the "more likely than not" standard of

realization as outlined in SFAS No. 109, Accounting for Income Taxes as a result of the decrease in revenues and operating profit margins in our Capital Equipment Business Segment during the second quarter of 2005. If the valuation allowance is fully realized, \$9.8 million will reduce goodwill and intangible assets and the balance will reduce income tax expense.

On October 22, 2004, the American Jobs Creation Act of 2004 (the "Act") was signed into law. The Act creates a one-time incentive for U.S. corporations to repatriate undistributed earnings from their international subsidiaries by providing an 85% dividends-received-deduction for certain international earnings. The deduction is available to corporations during the tax year that includes October 22, 2004 or in the immediately subsequent year. The Company is in the process of evaluating whether it will repatriate international earnings under the provisions of the Act.

## 9. Warranty

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

	Beginning Balance	Payments	Additions(a)	Ending Balance
	(in thousands)			
Year ended December 31, 2004	\$ 993	(841)	608	\$ 760
Six Months Ended June 30, 2005	\$ 760	(298)	243	\$ 705

(a) Includes additions of acquired companies

## 10. Comprehensive Income

Accumulated other comprehensive income, a component of stockholders' equity, as of June 30, 2005 and December 31, 2004, consists of cumulative foreign currency translation adjustments of \$5.0 million and \$8.1 million, respectively, and a minimum additional pension liability, net of tax, of (\$0.6) million.

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The components of total comprehensive income (loss) were as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2005	2004	2005	2004
	(in thousands)			
Net Income (Loss)	\$ (27,379)	\$ 298	\$ (27,177)	\$ 247
Other Comprehensive Income (Loss)	(2,264)	(506)	(3,107)	442
Comprehensive Income (Loss)	\$ (29,643)	\$ (208)	\$ (30,284)	\$ 689

Other comprehensive income (loss) for the three and six months ended June 30, 2005 and 2004 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:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2005	2004	2005	2004
	(in thousands)			
Components of net periodic benefit cost:				
Service cost	\$ 108	\$ 99	\$ 220	\$ 199
Interest cost	171	153	347	308
Expected return on plan assets	(182)	(167)	(369)	(336)
Net amortization loss	40	31	82	62
Net periodic benefit cost	\$ 137	\$ 116	\$ 280	\$ 233

For the three months ended June 30, 2005, the Company has contributed approximately \$0.1 million to the defined benefit plans. For the six months ended June 30, 2005, the Company has contributed approximately \$0.3 million to the defined benefit plans. The Company expects to contribute approximately \$0.6 million to the defined benefit plans during 2005.

## 12. Segment Information

During the quarter ended June 30, 2005, the Company realigned its lines of business for financial reporting purposes into two business segments, the Apparatus and Instrumentation Business Segment and the Capital Equipment Business Segment. Corporate costs are not allocated for purposes of segment reporting. The Company had previously been arranged in a single segment.

### Apparatus and Instrumentation

The Company's Apparatus and Instrumentation Business Segment represents approximately 73% of our total revenues for the six months ended June 30, 2005. The products sold by the Apparatus and Instrumentation Business Segment are typically priced under \$10,000 and are sold through a comprehensive catalog and web site, through distributors including GE Healthcare (formerly Amersham Biosciences) and Fisher Scientific, or in some cases through direct sales people. The products include syringe pumps, ventilators, isolated organ systems and amino acid analyzers, spectrophotometers, plate readers and gel electrophoresis units. The Company's end user customers are typically research scientists at pharmaceutical and biotechnology companies, universities and government laboratories world wide.

## Capital Equipment

The Company's Capital Equipment Business segment represents approximately 27% of our total revenues for the six months ended June 30, 2005. The products sold by our Capital Equipment Business Segment are typically priced over \$25,000 and often over \$100,000 and are typically sold through a direct sales organization which consists of sales and marketing personnel, customer service, technical support, field application support and service. The products include the COPAS flow cytometer, MIAS automated microscope, microarrays, and nanolitre dispensers. The Company's end user customers are typically research scientists at pharmaceutical and biotechnology companies, universities and government laboratories worldwide.

Corporate costs are not allocated for purposes of segment reporting. Information on these business segments is summarized as follows:

	<u>Apparatus and Instrumentation</u>	<u>Capital Equipment</u>	<u>Corporate</u>	<u>Eliminations</u>	<u>Total</u>
	(in thousands)				
<b>Three months ended June 30, 2005</b>					
Revenues:					
External customer	\$ 16,277	\$ 5,447	\$ —	\$ —	\$ 21,724
Intersegment	23	1	—	(24)	—
Total Revenues	16,300	5,448	—	(24)	21,724
Cost of product revenues	8,306	6,577	—	(24)	14,859
Sales and marketing expenses	2,041	2,305	—	—	4,346
General and administrative expenses	1,757	1,285	1,257	—	4,299
Research and development expenses	704	911	—	—	1,615
Asset abandonments and impairments	—	17,923	—	—	17,923
Restructuring expenses	302	665	—	—	967
Amortization of intangible assets	418	474	—	—	892
Operating income (loss)	2,772	(24,692)	(1,257)	—	(23,177)
Other income (expense), net	(111)	(109)	(131)	—	(351)
Segment assets (as of June 30, 2005)	70,780	36,699	—	—	107,479
<b>Three months ended June 30, 2004</b>					
Revenues:					
External customer	\$ 15,626	\$ 6,834	\$ —	\$ —	\$ 22,460
Intersegment	25	9	—	(34)	—
Total Revenues	15,651	6,843	—	(34)	22,460
Cost of product revenues	7,975	3,237	—	(34)	11,178
Sales and marketing expenses	1,839	2,449	—	—	4,288
General and administrative expenses	1,643	778	973	—	3,394
Research and development expenses	696	1,051	—	—	1,747
Asset abandonments and impairments	—	—	—	—	—
Restructuring expenses	—	157	—	—	157
Amortization of intangible assets	591	498	—	—	1,089
Operating income (loss)	2,907	(1,327)	(973)	—	607
Other income (expense), net	(108)	(17)	(66)	—	(191)

	<u>Apparatus and Instrumentation</u>	<u>Capital Equipment</u>	<u>Corporate</u>	<u>Eliminations</u>	<u>Total</u>
	(in thousands)				
<b>Six months ended June 30, 2005</b>					
Revenues:					
External customer	\$ 32,412	\$ 11,747	\$ —	\$ —	\$ 44,159
Intersegment	34	—	—	(34)	—
Total Revenues	32,446	11,747	—	(34)	44,159
Cost of product revenues	16,795	9,487	—	(34)	26,248
Sales and marketing expenses	4,091	4,681	—	—	8,772
General and administrative expenses	3,454	1,822	2,354	—	7,630
Research and development expenses	1,574	1,928	—	—	3,502
Asset abandonments and impairments	—	17,923	—	—	17,923
Restructuring expenses	302	665	—	—	967
Amortization of intangible assets	842	946	—	—	1,788
Operating income (loss)	5,388	(25,705)	(2,354)	—	(22,671)
Other income (expense), net	(222)	(140)	(170)	—	(532)
<b>Six months ended June 30, 2004</b>					
Revenues:					
External customer	\$ 30,812	\$ 13,813	\$ —	\$ —	\$ 44,625
Intersegment	43	107	—	(150)	—
Total Revenues	30,855	13,920	—	(150)	44,625
Cost of product revenues	15,781	7,135	—	(150)	22,766
Sales and marketing expenses	3,693	4,893	—	—	8,586
General and administrative expenses	3,251	1,575	1,828	—	6,654
Research and development expenses	1,321	2,095	—	—	3,416
Asset abandonments and impairments	—	—	—	—	—
Restructuring expenses	—	421	—	—	421



Amortization of intangible assets	1,023	989	—	—	2,012
Operating income (loss)	5,786	(3,188)	(1,828)	—	770
Other income (expense), net	(244)	(99)	(162)	—	(505)

### 13. Subsequent Event

During July 2005, the Company announced plans to divest its Capital Equipment Business Segment. The decision to divest this business segment is based on the fact that market conditions for the Capital Equipment Business Segment have been such that this business has not met the Company's expectations and the Company's decision to focus Company resources on the Apparatus and Instrumentation Business Segment. As of June 30, 2005, the Company did not qualify for held for sale accounting treatment under SFAS No. 144 and as a result the operating results for the Capital Equipment Business Segment are presented as part of continuing operations.

## 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 management's confidence or expectations, our plans to divest the Capital Equipment Business Segment, our business strategy, our ability to raise capital or borrow funds to consummate acquisitions and the availability of attractive acquisition candidates, our expectations regarding future costs of product revenues, our estimates regarding our capital requirements, our expenses of complying with the Sarbanes-Oxley Act of 2002, our anticipated compliance with the covenants contained in our credit facility, the adequacy of our financial resources 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 17 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

During the quarter ended June 30, 2005, the Company realigned its lines of business for financial reporting purposes into two business segments, the Apparatus and Instrumentation Business Segment and the Capital Equipment Business Segment. Corporate costs are not allocated for purposes of segment reporting. The Company had previously been arranged in a single segment.

During July 2005, the Company announced plans to divest its Capital Equipment Business Segment. The decision to divest this business segment is based on the fact that market conditions for the Capital Equipment Business Segment have been such that this business has not met the Company's expectations and the Company's decision to focus Company resources on our Apparatus and Instrumentation Business Segment. As of June 30, 2005, the Company did not qualify for held for sale accounting treatment under SFAS No. 144 and as a result the operating results for the Capital Equipment Business Segment are presented as part of continuing operations.

From 1997 to 2004 our revenues grew at an annual compounded growth rate of approximately 35%. 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, 2003, and 2004, it has provided us with strong growth through acquisition. For 2005, without taking into account the planned divestiture of the Capital Equipment Business Segment, the Company expects revenue growth without further acquisitions to be below historic levels or to slightly decline. During the six months ended June 30, 2005, revenue decreased approximately 1% compared to the same period in 2004.

### Apparatus and Instrumentation Business Segment

The Company's Apparatus and Instrumentation Business Segment represents approximately 73% of our total revenues for the six months ended June 30, 2005. The products sold by the Apparatus and Instrumentation Business Segment are typically priced under \$10,000 and are sold through a comprehensive catalog and web site, through distributors including GE Healthcare (formerly Amersham Biosciences) and Fisher Scientific, or in some cases through direct sales people. The products include syringe pumps, ventilators, isolated organ systems and amino acid analyzers, spectrophotometers, plate readers and gel electrophoresis units. The Company's end user customers are typically research scientists at pharmaceutical and biotechnology companies, universities and government laboratories world wide.

### Capital Equipment Business Segment

The Company's Capital Equipment Business Segment represents approximately 27% of our total revenues for the six months ended June 30, 2005. The products sold by our Capital Equipment Business Segment are typically priced over \$25,000 and often over \$100,000 and are typically sold through a direct sales organization which consists of sales and marketing personnel, customer service, technical support, field application support and service. The products

include the COPAS flow cytometer, MIAS automated microscope, microarrays, and nanolitre dispensers. The Company's end user customers are typically research scientists at pharmaceutical and biotechnology companies, universities and government laboratories worldwide.

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. These products lines are included in our Capital Equipment Business Segment. The capital equipment market has been volatile and is much more seasonal compared to our Apparatus and Instrumentation Business Segment, and, as such, we believe we have experienced, and we believe we will continue to experience, substantial fluctuations in our quarterly revenues from our Capital Equipment Business Segment. Reduced demand, delays in purchase orders, receipt, manufacture or shipment of products or receivables collection of these relatively high-priced products have led to substantial variability from quarter to quarter in our revenues, operating results and working capital requirements.

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. 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.

## **Financing**

During 2003 we entered into a \$20 million credit facility with Brown Brothers Harriman & Co., under which we had drawn down approximately \$15.2 million as of June 30, 2005. 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

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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 beyond what our current cash balances and cash flow from operations can support we will need to raise more capital, either by incurring additional debt, issuing equity or a combination or through the sale of our Capital Equipment Business Segment. Currently, we are prohibited from accessing the public debt or equity markets until we are able to provide historical audited financial statements for a previous acquisition or until such financial statements are no longer required to be provided by SEC regulations. Until this matter is resolved, our ability to raise capital may be limited to private equity transactions, and/or the sale of our Capital Equipment Business Segment, additional borrowing and may result in entering into an agreement on less than favorable terms.

To the extent we receive some or all of the proceeds in cash from the planned divestiture of the Capital Equipment Business Segment, we intend to apply any cash proceeds to the repayment of debt, to continue our tuck-under acquisition strategy within the Apparatus and Instrumentation Business Segment, and we may consider other uses.

## **Components of Operating Income**

*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 typically research scientists at pharmaceutical and biotechnology companies, universities and government laboratories worldwide. Revenue from catalog sales in any period is generally 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 22% of our revenues for the year ended December 31, 2004 and approximately 21% for the six months ended June 30, 2005, 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, 2004 approximately 53% of our revenues were derived from sales to distributors. For the six months ended June 30, 2005, approximately 58% of our revenues were derived from sales to distributors.

For our higher priced products, which are typically priced over \$25,000, we have a direct sales organization which consists of sales and marketing personnel, customer service, technical support, field application support and service. These organizations have been structured to attend to the specific needs

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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, 2004, approximately 25% of our revenues were derived from sales by our direct sales force. For the six months ended June 30, 2005, approximately 21%, respectively, of our revenues were derived from sales by our direct sales force.

For the year ended December 31, 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 year ended December 31, 2004 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 six months ended June 30, 2005, approximately 93% of our revenues were derived from products we manufacture or from collaboration and research grant projects. The remaining 7% of our revenues for the six months ended June 30, 2005, were derived from complementary products we distribute. For the year ended December 31, 2004 and the three and six months ended June 30, 2005, approximately 46% and 47%, 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, the distributor for our spectrophotometers, some of our 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 Uppsala, 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 cost 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 product revenues 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 to end user sales and distributor sales, mix by product line and mix by geography.

**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 resource functions. Other costs include, 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 launching additional catalogs or web-sites or adding distributors. 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 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.

## Results of Operations

### Three months ended June 30, 2005 compared to three months ended June 30, 2004:

#### Revenues.

	Three Months Ended June 30,		Dollar Change	Percent Change
	2005	2004		
	(in thousands)			
Revenues				
Apparatus and Instrumentation	\$ 16,277	\$ 15,626	\$ 651	4.2%
Capital Equipment	5,447	6,834	(1,387)	-20.3%
Total	<u>21,724</u>	<u>22,460</u>	<u>(736)</u>	-3.3%

**Apparatus and Instrumentation.** Revenues increased \$0.7 million, or 4.2%, to \$16.3 million for the three months ended June 30, 2005 from \$15.6 million for the three months ended June 30, 2004. The increase in sales at Harvard Apparatus of approximately \$0.2 million was primarily due to the increase in sales across various domestic product lines. Revenues increased approximately \$0.4 million at our Biochrom subsidiary primarily due to the establishment of additional European distribution channels, increased sales to G.E. Healthcare, and an increase in sales at our Asys subsidiary. Also contributing to the increase in revenues for the second quarter of 2005 was a positive impact on sales denominated in foreign currencies of approximately \$0.1 million.

**Capital Equipment.** Revenues decreased \$1.4 million, or 20.3%, to \$5.4 million for the three months ended June 30, 2005 from \$6.8 million for the three months ended June 30, 2004. The decrease in revenues for the three months ended June 30, 2005 compared to the same period of 2004 was primarily due to general decline in business across a variety of product lines at our Genomic Solutions, Union Biometrica and MAIA Scientific subsidiaries.

#### Cost of product revenues.

	Three Months Ended June 30,		Dollar Change	Percent Change
	2005	2004		
	(in thousands)			
Cost of product sales				
Apparatus and Instrumentation	\$ 8,283	\$ 7,950	\$ 333	4.2%
Capital Equipment	6,576	3,228	3,348	103.7%
Total	<u>14,859</u>	<u>11,178</u>	<u>3,681</u>	32.9%

**Apparatus and Instrumentation.** Cost of product revenues increased \$0.3 million, or 4.2%, to \$8.3 million for the three months ended June 30, 2005 from \$8.0 million for the three months ended June 30, 2004. The increase in cost of product revenue is directly attributed to the increase in revenues described above.

**Capital Equipment.** Cost of product revenues increased \$3.4 million, or 103.7%, to \$6.6 million for the three months ended June 30, 2005 from \$3.2 million for the three months ended June 30, 2004. The increase in cost of product sales is primarily related to the write-off of inventory for rationalized products of \$3.5 million (see Restructuring Charges below).

**Sales and marketing expense.**

	Three Months Ended June 30,		Dollar Change	Percent Change
	2005	2004		
(in thousands)				
Sales and marketing expenses				
Apparatus and Instrumentation	\$ 2,041	\$ 1,839	\$ 202	11.0%
Capital Equipment	2,305	2,449	(144)	-5.9%
Total	<u>4,346</u>	<u>4,288</u>	<u>58</u>	1.4%

**Apparatus and Instrumentation.** Sales and marketing expenses increased \$0.2 million, or 11.0%, to \$2.0 million for the three months ended June 30, 2005 from \$1.8 million for the three months ended June 30, 2004. The increase in sales and marketing expenses of \$0.2 million is primarily due to increased investment in direct marketing at Harvard Apparatus.

**Capital Equipment.** Sales and marketing expenses decreased \$0.1 million, or 5.9%, to \$2.3 million for the three months ended June 30, 2005 from \$2.4 million for the three months ended June 30, 2004. The decrease in sales and marketing expenses is primarily related to a decrease in commission expense due to a decrease in revenue levels during the second quarter of 2005 compared to the same period in 2004.

**General and administrative expense.**

	Three Months Ended June 30,		Dollar Change	Percent Change
	2005	2004		
(in thousands)				
General and administrative expenses				
Apparatus and Instrumentation	\$ 1,757	\$ 1,643	\$ 114	6.9%
Capital Equipment	1,285	778	507	65.2%
Corporate	1,257	973	284	29.2%
Total	<u>4,299</u>	<u>3,394</u>	<u>905</u>	26.7%

**Apparatus and Instrumentation.** General and administrative expenses increased \$0.1 million, or 6.9%, to \$1.7 million for the three months ended June 30, 2005 from \$1.6 million for the three months ended June 30, 2004. The increase in general and administrative expense is primarily due to the increased investment noted above at Harvard Apparatus.

**Capital Equipment.** General and administrative expenses increased \$0.5 million, or 65.2%, to \$1.3 million for the three months ended June 30, 2005 from \$0.8 million for the three months ended June 30, 2004. The increase in general and administrative expenses is primarily related to an increase of \$0.7 million in our allowance for doubtful accounts as a customer of our Genomic Solutions UK subsidiary filed for insolvency. This increase was offset by decreased payroll and payroll related expenses at our Genomic Solutions subsidiary.

**Corporate.** General and administrative expenses increased \$0.3 million, or 29.2%, to \$1.3 million for the three months ended June 30, 2005 from \$1.0 million for the three months ended June 30, 2004. The increases in general and administrative expenses are primarily due to costs associated with Sarbanes-Oxley compliance.

**Research and development expense.**

	Three Months Ended June 30,		Dollar Change	Percent Change
	2005	2004		
(in thousands)				
Research and development expenses				
Apparatus and Instrumentation	\$ 704	\$ 696	\$ 8	1.1%
Capital Equipment	911	1,051	(140)	-13.3%
Total	<u>1,615</u>	<u>1,747</u>	<u>(132)</u>	-7.6%

**Apparatus and Instrumentation.** Research and development expenses of \$0.7 million for the three months ended June 30, 2005, were relatively consistent with the same period of 2004.

**Capital Equipment.** Research and development expenses decreased \$0.2 million, or 13.3%, to \$0.9 million for the three months ended June 30, 2005 from \$1.1 million for the three months ended June 30, 2004. The decrease primarily relates to a decrease in salary and salary related expenses which was the result of 2004 restructuring activities.

**Asset abandonments and impairments.**

During the second quarter of 2005, the asset groups that comprise the Company's Capital Equipment Business Segment, experienced a significant decrease in revenues and operating profit margins. As a result, with the assistance of third party independent appraisers the Company re-evaluated the long-lived assets associated with these asset groups in accordance with SFAS No. 144, *Accounting for Impairments or Disposal of Long-Lived Assets* and determined that certain intangible assets within these asset groups were impaired as of June 30, 2005. The Company recorded abandonment and impairment charges within the Capital Equipment Business Segment totaling approximately \$8.0 million for long-lived assets during the second quarter of 2005.

Also, as a result of the significant decrease in revenues and operating profit margins experienced by the Capital Equipment Business Segment during the second quarter, in accordance with SFAS No. 142, *Goodwill and Other Intangible Assets*, the Company, with the assistance of third party independent appraisers, re-evaluated the goodwill associated with the Genomic Solutions and Union Biometrica reporting units for impairment as of June 30, 2005. As a result of this goodwill impairment testing, the Company recorded impairment charges within the Capital Equipment Business Segment of approximately \$9.9 million for goodwill during the second quarter of 2005.

### **Restructuring charges.**

Restructuring charges were \$4.5 million for the three months ended June 30, 2005 compared to \$0.2 million for the same period in 2004. The cost of sales component of the 2005 restructuring charges was approximately \$3.5 million and related to the write-off of inventory. The remaining \$1.0 million related to severance and other facility closure costs.

During 2004, the Company announced restructuring activities at its Genomic Solutions subsidiary related to the closure of a manufacturing facility and realignment of its cost structure. Total restructuring charges for 2004 were approximately \$0.4 million. During 2005, the Company reviewed and modified this plan to include the closure of another manufacturing facility and to discontinue certain product lines due to product rationalization decisions made during the second quarter. Total restructuring charges during the six months ended June 30, 2005 for the Genomic Solutions subsidiary were \$4.0 million. These charges related primarily to the write-off of inventory for rationalized products of \$3.5 million, severance costs of \$0.2 million, facility closure costs of \$0.2 million and other costs of \$0.1 million. The remaining \$0.5 million of restructuring charges recorded during the second quarter of 2005 were related to a decision to

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consolidate our Union Biometrica US manufacturing facility into our Holliston, MA facility (approximately \$0.2 million) and the realignment of personnel at our Biochrom, Scie-Plas and Hoefer subsidiaries (approximately \$0.3 million).

### **Amortization of intangible assets.**

Amortization of intangibles was \$0.9 million and \$1.1 million for the three months ended June 30, 2005 and 2004, respectively.

### **Other income (expense), net.**

Other expense, net, for the three months ended June 30, 2005 was \$0.4 million compared to \$0.2 million for the same period of 2004. Other expense, net included approximately \$0.2 million interest expense for the three months ended June 30, 2005 and 2004. Other expense, net, for the three months ended June 30, 2005 and 2004 included foreign exchange losses of \$0.2 million and \$26,000, respectively. These exchange losses were primarily the result of currency fluctuations on net payables and receivables between our subsidiaries.

### **Income taxes.**

Income tax expense increased \$3.8 million to \$3.9 million for the three months ended June 30, 2005 from \$0.1 million for the three months ended June 30, 2004. The increase in income tax expense is primarily due to an increase in our valuation allowance for deferred tax assets. The increase in our valuation allowance is the result of the Company's determination that a portion of the gross deferred tax assets do not meet the "more likely than not" standard of realization based on the Company's ability to generate sufficient future taxable income. This is the result of the decrease in revenues and operating profit margins in our Capital Equipment Business Segment during the second quarter of 2005. The valuation allowance was determined in accordance with the provisions of SFAS No. 109, *Accounting for Income Taxes*.

### **Six months ended June 30, 2005 compared to six months ended June 30, 2004:**

#### **Revenues.**

	Six Months Ended June 30,		Dollar Change	Percent Change
	2005	2004		
	(in thousands)			
Revenues				
Apparatus and Instrumentation	\$ 32,412	\$ 30,812	\$ 1,600	5.2%
Capital Equipment	11,747	13,813	(2,066)	-15.0%
Total	<u>44,159</u>	<u>44,625</u>	<u>(466)</u>	-1.0%

*Apparatus and Instrumentation.* Revenues increased \$1.6 million, or 5.2% to \$32.4 million for the six months ended June 30, 2005 from \$30.8 million for the six months ended June 30, 2004. The increase in revenues of approximately \$1.6 million was primarily due to an increase of approximately \$0.7 million due to the acquisition of the KD Scientific business and of approximately \$0.8 million in our Biochrom reporting unit primarily due to the establishment of additional European distribution channels and an increase in sales at our Asys subsidiary. Also contributing to the increase in revenues for the first six months of 2005 was a positive impact on sales denominated in foreign currencies of approximately \$0.3 million.

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*Capital Equipment.* Revenues decreased \$2.1 million, or 15.0%, to \$11.7 million for the six months ended June 30, 2005 from \$13.8 million for the six months ended June 30, 2004. The decrease in revenues for the six months ended June 30, 2005 compared to the same period of 2004 was primarily due to general decline in business across a variety of product lines at our Genomic Solutions, Union Biometrica and MAIA Scientific subsidiaries.

#### **Cost of product revenues.**

	Six Months Ended June 30,	Dollar	Percent
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	2005	2004	Change	Change
	(in thousands)			
Cost of product sales				
Apparatus and Instrumentation	\$ 16,760	\$ 15,738	\$ 1,022	6.5%
Capital Equipment	9,488	7,028	2,460	35.0%
Total	<u>26,248</u>	<u>22,766</u>	<u>3,482</u>	15.3%

*Apparatus and Instrumentation.* Cost of product revenues increased \$1.0 million, or 6.5%, to \$16.8 million for the six months ended June 30, 2005 from \$15.7 million for the six months ended June 30, 2004. The increase in cost of product sales is directly attributed to the increase in revenues described above and an increase in sales of products with lower gross margins at our Biochrom subsidiary.

*Capital Equipment.* Cost of product revenues increased \$2.5 million, or 35.0%, to \$9.5 million for the six months ended June 30, 2005 from \$7.0 million for the six months ended June 30, 2004. The increase in cost of product sales is related to the write-off of inventory for rationalized products of \$3.5 million (see restructuring charges below) offset in part by a decrease in cost of product revenues due to a decrease in sales volumes.

#### **Sales and marketing expense.**

	Six Months Ended June 30,		Dollar	Percent
	2005	2004	Change	Change
	(in thousands)			
Sales and marketing expenses				
Apparatus and Instrumentation	\$ 4,091	\$ 3,693	\$ 398	10.8%
Capital Equipment	4,681	4,893	(212)	-4.3%
Total	<u>8,772</u>	<u>8,586</u>	<u>186</u>	2.2%

*Apparatus and Instrumentation.* Sales and marketing expenses increased \$0.4 million, or 10.8%, to \$4.1 million for the six months ended June 30, 2005 from \$3.7 million for the six months ended June 30, 2004. The increase in sales and marketing expenses is primarily due to increased investment in direct marketing at Harvard Apparatus and expanding distribution channels at Hoefer.

*Capital Equipment.* Sales and marketing expenses decreased \$0.2 million, or 4.3%, to \$4.7 million for the six months ended June 30, 2005 from \$4.9 million for the six months ended June 30, 2004. The decrease in sales and marketing expenses is primarily related to a decrease in commission expense due to decrease in revenue levels during the second quarter of 2005 compared to the same period in 2004.

#### **General and administrative expense.**

	Six Months Ended June 30,		Dollar	Percent
	2005	2004	Change	Change
	(in thousands)			
General and administrative expenses				
Apparatus and Instrumentation	\$ 3,454	\$ 3,251	\$ 203	6.2%
Capital Equipment	1,822	1,575	247	15.7%
Corporate	2,354	1,828	526	28.8%
Total	<u>7,630</u>	<u>6,654</u>	<u>976</u>	14.7%

*Apparatus and Instrumentation.* General and administrative expenses increased \$0.2 million, or 6.2%, to \$3.5 million for the six months ended June 30, 2005 from \$3.3 million for the six months ended June 30, 2004. The increase in general and administrative expense is primarily due to our acquisition of KD Scientific and to an increase in salary and related expenses.

*Capital Equipment.* General and administrative expenses increased \$0.2 million, or 15.7%, to \$1.8 million for the six months ended June 30, 2005 from \$1.6 million for the six months ended June 30, 2004. The increase in general and administrative expenses is primarily related to an increase of \$0.7 million in our allowance for doubtful accounts as a customer of our Genomic Solutions UK subsidiary filed for insolvency. This increase was offset by a decrease in payroll and payroll related expenses at our Genomic Solutions subsidiary which was the result of restructuring activities.

*Corporate.* General and administrative expenses increased \$0.5 million, or 28.8%, to \$2.4 million for the six months ended June 30, 2005 from \$1.8 million for the six months ended June 30, 2004. The increases in general and administrative expenses are primarily due to costs associated with Sarbanes-Oxley compliance.

#### **Research and development expense.**

	Six Months Ended June 30,		Dollar	Percent
	2005	2004	Change	Change
	(in thousands)			
Research and development expenses				
Apparatus and Instrumentation	\$ 1,574	\$ 1,321	\$ 253	19.2%
Capital Equipment	1,928	2,095	(167)	-8.0%
Total	<u>3,502</u>	<u>3,416</u>	<u>86</u>	2.5%

*Apparatus and Instrumentation.* Research and development expenses increased \$0.3 million, or 19.2%, to \$1.6 million for the six months ended June 30, 2005 from \$1.3 million for the six months ended June 30, 2004. The increase was primarily due to investment to launch our new BTX 2001 electrofusion system.

*Capital Equipment.* Research and development expenses decreased \$0.2 million, or 8.0%, to \$1.9 million for the six months ended June 30, 2005 from \$2.1 million for the six months ended June 30, 2004. The decrease primarily relates to a decrease in salary and salary related expenses which was the result of 2004 restructuring activities.

### **Asset abandonments and impairments.**

During the second quarter of 2005, the asset groups that comprise the Company's Capital Equipment Business Segment, experienced a significant decrease in revenues and operating profit margins. As a result, with the assistance of third party independent appraisers the Company re-evaluated the long-lived assets

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associated with these asset groups in accordance with SFAS No. 144, *Accounting for Impairments or Disposal of Long-Lived Assets* and determined that certain intangible assets within these asset groups were impaired as of June 30, 2005. The Company recorded abandonment and impairment charges within the Capital Equipment Business Segment totaling approximately \$8.0 million for long-lived assets during the second quarter of 2005.

Also, as a result of the significant decrease in revenues and operating profit margins experienced by the Capital Equipment Business Segment during the second quarter, in accordance with SFAS No. 142, *Goodwill and Other Intangible Assets*, the Company, with the assistance of third party independent appraisers, re-evaluated the goodwill associated with the Genomic Solutions and Union Biometrica reporting units for impairment as of June 30, 2005. As a result of this goodwill impairment testing, the Company recorded impairment charges within the Capital Equipment Business Segment of approximately \$9.9 million for goodwill during the second quarter of 2005.

### **Restructuring charges.**

Restructuring charges were \$4.5 million for the six months ended June 30, 2005 compared to \$0.4 million for the same period in 2004. The cost of sales component of the 2005 restructuring charges was approximately \$3.5 million and related to the write-off of certain inventory in the Capital Equipment Business Segment. The remaining \$1.0 million related to severance and other facility closure costs.

During 2004, the Company announced restructuring activities at its Genomic Solutions subsidiary related to the closure of a manufacturing facility and realignment of its cost structure. Total restructuring charges for 2004 were approximately \$0.4 million. During 2005, the Company reviewed and modified this plan to include the closure of another manufacturing facility and to discontinue certain product lines due to product rationalization decisions made during the second quarter. Total restructuring charges during the six months ended June 30, 2005 for the Genomic Solutions subsidiary were \$4.0 million. These charges related primarily to the write-off of inventory for rationalized products of \$3.5 million, severance costs of \$0.2 million, facility closure costs of \$0.2 million and other costs of \$0.1 million. The remaining \$0.5 million of restructuring charges recorded during the second quarter of 2005 were related to a decision to consolidate our Union Biometrica US manufacturing facility into our Holliston, MA facility (approximately \$0.2 million) and the realignment of personnel at our Biochrom, Scie-Plas and Hoefer subsidiaries (approximately \$0.3 million).

### **Amortization of intangible assets.**

Amortization of intangibles was \$1.8 million and \$2.0 million for the six months ended June 30, 2005 and 2004, respectively.

### **Other income (expense), net.**

Other expense, net, for the six months ended June 30, 2005 and 2004 was \$0.5 million. Other expense, net included approximately \$0.5 million interest expense for the six months ended June 30, 2005 compared to \$0.4 million for the same period in 2004. Other expense, net, for the six months ended June 30, 2005 and 2004 also included foreign exchange losses of \$0.3 million and \$0.2 million, respectively. These exchange losses were primarily the result of currency fluctuations on net payables and receivables between our subsidiaries.

### **Income taxes.**

Income tax expense increased to \$4.0 million for the six months ended June 30, 2005. The increase in income tax expense is primarily due to an increase in our valuation allowance for deferred tax assets. The increase in our valuation allowance is the result of the Company's determination that a portion of the gross deferred tax assets do not meet the "more likely than not" standard of realization based on the Company's

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ability to generate sufficient future taxable income. The valuation allowance was determined in accordance with the provisions of SFAS No. 109, *Accounting for Income Taxes*.

### **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 June 30, 2005, we had cash and cash equivalents of \$13.2 million which represents a decrease of approximately \$0.6 million from December 31, 2004. During the six months ended June 30, 2005, \$1.3 million of cash was used to pay down our credit facility. As of June 30, 2005, we had approximately \$15.2 million outstanding thereunder.

#### **Overview of Cash Flows for the six months ended June 30, (in thousands, unaudited)**

	<u>Six Months Ended June 30,</u>	
	<u>2005</u>	<u>2004</u>
Cash flows from operations:		
Net Income	\$ (27,177)	\$ 247
Changes in assets and liabilities	4,149	1,421
Other adjustments to operating cash flows	24,828	3,337
Cash provided by operations	1,800	5,005
Investing activities:		
Acquisition of businesses	0	(6,776)
Other investing activities	(707)	(1,361)

Cash used in investing activities	(707)	(8,137)
Financing activities:		
Cash (repayments) receipts of debt, net	(1,312)	4,956
Other financing activities	167	539
Cash provided by (used in) financing activities	(1,145)	5,495
Exchange effect on cash	(570)	(71)
Increase (decrease) in cash and cash equivalents	<u>\$ (622)</u>	<u>\$ 2,292</u>

Our operating activities generated cash of \$1.8 million for the six months ended June 30, 2005 compared to \$5.0 million for the same period in 2004. The decrease in cash provided by operating activities from the six months ended June 30, 2005 compared to the same period in 2004 was primarily as result of the a decrease in operating profits which is the result of lower revenues in our Capital Equipment Business Segment compared to the same period in 2004.

Our investing activities used cash of \$0.7 million in the first six months of 2005 compared to \$8.1 million for the same period in 2004. During the first quarter of 2004, the Company acquired KD Scientific for approximately \$6.6 million. The caption "Other Investing Activities" primarily includes purchases of property, plant, and equipment. During the next twelve months the Company expects to make capital expenditures of approximately \$2.0 million.

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. During 2005, we repaid \$1.3 million on our \$20 million credit facility with Brown Brothers Harriman & Co. During the six months ended June 30, 2004, we borrowed \$7.0 million under the credit facility to fund the acquisition of KD Scientific and working capital requirements and we repaid \$1.3 million during the second quarter of 2004.

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 debt or equity markets until we are able to provide historical audited financial statements for a previous acquisition or until such financial statements are no longer required to be provided by SEC regulations. 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 six months of 2005, the U.S. dollar weakened against these currencies relative to the same six month period in 2004. This resulted in increased consolidated revenue and earnings growth.

Our exchange gains and losses were primarily the result of currency fluctuations on net payables and receivables among our subsidiaries. Currency fluctuations resulted in approximately \$0.3 million and \$0.2 million of foreign currency losses during the six months ended June 30, 2005 and 2004, respectively.

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

*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*. When

the Company determines that there is more than one unit of accounting, and there is objective and reliable evidence of fair value for all units of accounting in an arrangement, the arrangement consideration is allocated to the separate units of accounting based on their relative fair values. In situations where there is objective and reliable evidence of the fair value(s) of the undelivered item(s) in an arrangement but no such evidence for the delivered item(s) the Company



applies the residual method to allocate fair value. Under the residual method, the amount of consideration allocated to the delivered item(s) equals the total arrangement consideration less the aggregate fair value of the undelivered item(s). Revenue for each unit of accounting is recorded once all applicable revenue recognition criteria have been met. Service agreements on our equipment are typically sold separately from the sale of the equipment. Revenues on these service agreements are recognized ratably over the life of the agreement, typically one year, in accordance with FASB Technical Bulletin FTB 90-1, *Accounting for Separately Priced Extended Warranty and Product Maintenance Contracts*.

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 Company's costs incurred 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.

*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

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established a valuation allowance attributable to certain temporary differences as we believe that a portion of the deferred tax assets at June 30, 2005 do not meet the "more likely than not" standard of realization based on the Company's ability to generate sufficient future taxable income 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 estimates of future taxable income, future reversals of existing taxable temporary differences, and tax planning strategies that would, if necessary, be implemented to realize the benefit of a deferred tax asset before expiration.

*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 acquired 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 management's judgment of expected conditions and expected courses of action.

*Valuation of in-process research and development acquired 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

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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 value of identifiable intangibles with finite lives and long-lived assets for impairment 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; 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 goodwill 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. For unamortizable intangible assets if the carrying amount exceeds the fair value of the asset, the Company would write-down the unamortizable intangible asset to fair value.

During the second quarter of 2005, the asset groups that comprise the Company's Capital Equipment Business Segment, experienced a significant decrease in revenues and operating profit margins. As a result, the Company re-evaluated the long-lived assets associated with these asset groups in accordance with SFAS No. 144, *Accounting for Impairments or Disposal of Long-Lived Assets* and determined that certain intangible assets within these asset groups were impaired as of June 30, 2005. The Company recorded abandonment and impairment charges within the Capital Equipment Business Segment totaling approximately \$8.0 million for long-lived assets during the second quarter of 2005.

Also, as a result of the significant decrease in revenues and operating profit margins experienced by the Capital Equipment Business Segment during the second quarter, in accordance with SFAS No. 142,

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*Goodwill and Other Intangible Assets*, the Company, with the assistance of third party independent appraisers, re-evaluated the goodwill associated with the Genomic Solutions and Union Biometrica reporting units for impairment as of June 30, 2005. As a result of this goodwill impairment testing, the Company recorded impairment charges within the Capital Equipment Business Segment of approximately \$9.9 million for goodwill during the second quarter of 2005.

### **Recent Accounting Pronouncements**

In November 2004, Statement of Financial Accounting Standards No. 151 ("SFAS No. 151"), *Inventory Costs: an Amendment of ARB No. 43, Chapter 4*, was issued. SFAS No. 151 clarifies the accounting for abnormal amounts of idle facility expense, freight, handling costs and wasted material by requiring those items to be recognized as current-period charges. The Statement is effective for fiscal years beginning after June 15, 2005. The Company does not believe that adoption of this Statement will have a material impact on its consolidated results of operations or financial position.

In December 2004, Statement of Financial Accounting Standards No. 123R ("SFAS No. 123R"), *Share-Based Payments, a revision of SFAS No. 123, Accounting for Stock-Based Compensation*, was issued. SFAS No. 123R addresses financial accounting and reporting for costs associated with stock-based compensation. SFAS No. 123R will require the Company to recognize compensation expense in an amount equal to the fair value of share-based payments related to unvested share-based awards over the applicable vesting period. The Statement is effective for annual periods beginning after June 15, 2005. The Company is currently evaluating the impact that the adoption of this Statement will have on its consolidated results of operations and financial position.

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### **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 are unable to complete the divestiture of our capital equipment business segment on attractive terms, our ability to implement our business strategy and our financial condition and results of operations may be materially adversely affected.***

On July 27, 2005, we announced our decision to divest of our capital equipment business segment. We have decided to divest this business segment based on the fact that market conditions for the capital equipment business segment have been such that this business has not met our expectations, and because we have made a decision to focus on our apparatus and instrumentation business. We cannot assure you that we will be able to complete the divestiture of the capital equipment business segment on favorable terms, or at all. If we are unable to divest our capital equipment business for more than

current book value, we will record a loss in connection with the sale that could be significant. If we are unable to sell our capital equipment business, we will be required to alter our current business strategy to determine how to proceed with this business segment. As a result, we may be required to engage in further restructuring activities or cease operating some or this entire business segment and liquidate its assets. In either case, we may incur additional expenses and additional asset impairments and management's attention may be diverted from our current business strategy. Additionally, in order to complete the divestiture of our capital equipment business segment, we will be required to obtain the consent of our lenders under our existing credit facility. If we are unable to obtain this consent for a potential divestiture, we will be required to either retain our capital equipment business segment or trigger a default under our credit facility pursuant to which our lenders could accelerate all of our outstanding indebtedness under, and terminate, our credit facility. As of June 30, 2005, we had approximately \$15.2 million outstanding under our credit facility. As a result of any of these events, our ability to implement our business strategy and our financial condition and results of operations may be materially adversely affected.

***By completing the divestiture of the capital equipment business we will be losing a substantial source of our revenues.***

The capital equipment business segment represented 40% and 30% of our revenues in 2003 and 2004, respectively and approximately 27% of our revenues for the first six months of 2005. By divesting of the capital equipment business segment, we will no longer have the assets that generated these revenues and, unless we are able to increase our revenues through organic growth or acquisitions, our revenues following the disposition will lower than they have been for these historical periods.

***Our decision to divest of our capital equipment business may cause potential customers to be less likely to commit to purchases of capital equipment from this business segment, which may materially adversely affect revenues generated from, and value that we may receive upon the sale of, our capital equipment business segment.***

Our capital equipment business segment relies on sales of capital products that are typically priced over \$25,000 and supported, following their sale, by customer support, technical support and field application service support personnel. As a result of the uncertain future of our capital equipment business segment, potential customers may be less likely to commit to purchases of expensive capital equipment from this business segment. Accordingly, the revenues generated from, and value that we may receive upon the divestiture of, our capital equipment business segment may be materially adversely affected.

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***The divestiture of our capital equipment business segment may disrupt our business or result in costs that could have a material adverse effect on our financial condition and results of operation.***

The divestiture of the capital equipment business may result in the disruption of our remaining apparatus and instrumentation business segment and diversion of management attention away from this business. We will also incur expenses in connection with our attempted divestiture of this business segment, which could materially adversely affect our financial condition or results of operations. This divestiture will require management to utilize estimates related to realizable values of assets made redundant or obsolete and expenses for severances, lease cancellations and other exit costs. Actual results could differ materially from those estimated due to, among other things: inability to sell the businesses at prices, or within time periods, anticipated by management; unanticipated expenditures in connection with the effectuation of the disposition; costs and length of time required to comply with legal requirements applicable to the disposition; and unanticipated difficulties in connection with consolidation of manufacturing and administrative functions.

***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.

***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.

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***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 and volatility 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 Genomic Solutions, Union Biometrica, 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 Genomic Solutions, Union Biometrica, 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 regain or 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 regain or sustain revenue growth, as evidenced during 2004, due to difficulties in integrating its acquisitions of GeneMachines and BioRobotics which resulted in a further restructuring in June 2004 which continued into the second quarter of 2005. Even if Genomic Solutions does achieve profitability, it may not sustain or increase profitability on a quarterly or annual basis.

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***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 and other intangible assets may have a material adverse effect on us.***

In accordance with the provisions of SFAS No. 144, we assess the value of identifiable intangibles with finite lives and long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying value may not be recoverable. In accordance with SFAS No. 142, goodwill and intangible assets with indefinite lives from acquisitions are evaluated annually, or more frequently, if events or circumstances indicate there may be an impairment, to determine whether any portion of the remaining balance of goodwill and indefinite lived intangibles may not be recoverable. If it is determined in the future that a portion of our goodwill and other intangible assets is impaired, we will be required to write off that portion of the asset according to the methods defined by SFAS No. 144 and SFAS No. 142, accordingly, which could have an adverse effect on net income for the period in which the write off occurs. During the quarter ended June 30, 2005, the Company recorded impairment of goodwill and other intangible assets of \$9.9 and \$8.0 million, respectively. At June 30, 2005, we had goodwill and intangible assets with indefinite lives of \$31.9 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 9. 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%, of total revenues for the six months ended June 30, 2005 and 46% of total revenues for 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 loss of approximately \$0.2 million and \$0.3 million for the three and six months ended June 30, 2005 and a decrease in foreign equity of approximately \$2.3 million and \$3.1 million the three and six months ended June 30, 2005,
- changes in a specific country's or region's political or economic conditions, including western Europe, in particular,
- potentially negative consequences from changes in tax laws affecting the ability to expatriate profits,
- difficulty in staffing and managing widespread operations, and

- unfavorable labor regulations applicable to European operations, such as 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 year ended December 31, 2004 and the six months ended June 30, 2005, approximately 43%, 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.

***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 were approximately \$1.3 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. We expect the cost of our Sarbanes-Oxley compliance efforts to be approximately \$1.0 million during 2005.

***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 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 Lusinski, 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.

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***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.***

During 2003 we entered into a \$20 million credit facility with Brown Brothers Harriman & Co., under which we had drawn down approximately \$15.2 million as of June 30, 2005. The credit facility contains various financial and other covenants, including covenants relating to income, debt coverage and cash flow and minimum working capital requirements. 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 debt or equity markets until we are able to provide historical audited financial statements for a previous acquisition or until such financial statements are no longer required to be provided by SEC regulations. 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 42 U.S. patents and have 18 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

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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 are unable to design around any third party patent, we may be unable to sell some of our products and services, which could result in reduced revenue.

***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

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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 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 profits could be adversely affected.***

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 COPASÔ 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

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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.***

During 2004, General Electric acquired Amersham plc, the parent of Amersham Biosciences. In connection with the acquisition, Amersham Biosciences was renamed GE Healthcare. While GE Healthcare has indicated its intention to continue Amersham's presence in the life science market, and we believe our relationship with GE Healthcare is good, we cannot guarantee that the distribution agreements will be renewed, that GE Healthcare will aggressively market our products in the future or that GE Healthcare will continue the partnership.

For 2004, approximately 18% of our revenues were generated through two distribution agreements with GE. The first distribution agreement was renegotiated in August 2001. Under this agreement, GE Healthcare 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 Healthcare or its authorized sub-distributors. We have little or no control over GE Healthcare's marketing and sales activities or the use of its resources. GE Healthcare may fail to purchase sufficient quantities of products from us or perform appropriate marketing and sales activities. The failure by GE Healthcare 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 Healthcare for product distribution could materially impede the growth of our business and our ability to generate sufficient revenue. Our agreement with GE Healthcare 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 Healthcare 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 Healthcare. Hoefer also has the right to develop, manufacture and market 2-D gel electrophoresis products, which would be offered to GE Healthcare for sale under the GE Healthcare's brand name. Hoefer has the right to sell any of its products, under the Hoefer brand name or any other non-GE Healthcare 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 Healthcare 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.

***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.

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***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, animal research 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 we 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 research centers in the United States, the United Kingdom, Germany, Belgium and Austria. We sell our products globally through our direct catalog sales, direct sales force and indirect distributor channels. 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 evaluate currency risks and we may enter into foreign exchange contracts from time to time to mitigate foreign currency exposure.

As of June 30, 2005 we had \$15.2 million in long term debt for amounts drawn against our revolving credit facility. A 10% change in interest rates, from the June 30, 2005 rate of 6.25% to 6.875%, would change the annual interest expense on this long term debt by approximately \$95,000. Effective June 30, 2005, the interest rate on this credit facility increased to 6.25%, 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 our disclosure controls and procedures. As described in "Management's Annual Report on Internal Control Over Financial Reporting," filed in our Form 10-K/A dated April 29, 2005, a material weakness was identified in our internal control over financial reporting related to the completeness, valuation and allocation of our accounting for income taxes. In addition, during the second quarter of 2005, a material weakness was identified in our internal control over financial reporting as the Company did not maintain effective controls over material journal entries made in connection with the financial closing process. As a result of this material weakness, a material adjustment was required in order to properly state the impairment expense recorded during the second quarter of 2005. Based upon the evaluation described above, our Chief Executive Officer and Chief Financial Officer have concluded that as a result of the aforementioned material weaknesses in internal control over financial reporting, our disclosure controls and procedures were not effective, as of the end of the period covered by this report. Accordingly, our disclosure controls and procedures did not operate effectively 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. Notwithstanding the existence of these material weaknesses, we believe that the consolidated financial statements present fairly, in all material respects, our financial position, results of operations and cash flows for the periods presented in this quarterly report on Form 10-Q.

We continue to review 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. Other than as noted above, there were no changes in our internal controls over financial reporting that occurred during the quarter ended June 30, 2005 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

**PART II. OTHER INFORMATION**

**Item 4. Submission of Matters to a Vote of Security Holders**

On May 19, 2005, the Company held its Annual Meeting of Stockholders. The stockholders voted, either in person or by proxy, to elect two Class II Directors until the 2008 Annual Meeting of Stockholders and until their successors are duly elected and qualified. The results of the meeting were as follows:

<u>Name of Director</u>	<u>For</u>	<u>Withheld</u>
David Green	27,363,682	358,967
John F. Kennedy	26,915,682	806,967

Following the Annual Meeting of Stockholders, the composition of the Board of Directors is as follows:

Class III Directors (to serve until 2006 Annual Meeting)

Chane Graziano  
Earl R. Lewis

Class I Directors (to serve until 2007 Annual Meeting)

Robert A. Dishman  
Neil J. Harte

Class II Directors (to serve until 2008 Annual Meeting)

David Green  
John F. Kennedy

**Item 6. Exhibits**

<u>Exhibit Index</u>	
10.1	Harvard Bioscience, Inc. 2005 Corporate Bonus Plan., incorporated by reference to Form 8-K dated May 25, 2005 and filed on June 1, 2005.
10.2+	Executive Officer Compensation Arrangements (2005 Salaries).
10.3+	2005 Director Compensation Arrangements.
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.

+ Filed herewithin

\* 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

Date: August 9, 2005

**Executive Officer Compensation Arrangements (2005 Salaries)**

The following summarizes the compensation arrangements established between Harvard Bioscience, Inc. (the "Company") and certain executive officers through verbal agreements.

On May 25, 2005, the Compensation Committee of the Board of Directors of the Company determined base salary levels for 2005 for certain executive officers of the Company. The base salary levels established for 2005 for these executive officers are as follows:

<u>Name</u>	<u>Title</u>	<u>2005 Salary</u>
Chane Graziano	Chief Executive Officer	\$ 455,000
David Green	President	\$ 375,000
Bryce Chicoyne	Chief Financial Officer	\$ 175,000
Susan M. Luscinski	Chief Operating Officer	\$ 235,000
Paul Bailey	Vice President of Finance and Administration	\$ 155,000
David Strack	President, Genomic Solutions, Inc. and Union Biometrica, Inc.	\$ 206,000
Mark A. Norige	Chief Operating Officer, Harvard Apparatus Business Unit	\$ 170,000

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**2005 Director Compensation Arrangements**

The following summarizes the compensation arrangements established between Harvard Bioscience, Inc. (the "Company") and its directors through verbal agreements to be effective as of immediately following the 2005 annual meeting of stockholders of the Company:

Each non-employee Director will be entitled to receive a non-qualified stock option to purchase 25,000 shares of common stock vesting annually over three years and granted on the fifth business day following his or her initial election to the Board and an annual retainer consisting of (a) \$12,000 paid in four equal quarterly installments and (b) a non-qualified stock option to purchase 2,500 shares of common stock vesting annually over three years and granted on the fifth business day following each annual stockholders meeting. Each non-employee Director member of the Audit Committee will be entitled to receive an additional annual retainer of \$6,000 paid in four equal quarterly installments and an option to purchase 2,500 shares of common stock vesting annually over three years and granted on the fifth business day following each annual stockholders meeting. Each non-employee Director member of the Compensation Committee will be entitled to receive an additional annual retainer of \$2,000 paid in four equal quarterly installments. In addition, non-employee Directors are reimbursed for their expenses incurred in connection with attending Board and committee meetings.

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**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) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) 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. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - 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: August 9, 2005

/s/ BRYCE CHICOYNE

Bryce Chicoyne

*Chief Financial Officer*

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**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) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) 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. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - 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: August 9, 2005

/s/ CHANE GRAZIANO

Chane Graziano

*Chief Executive Officer*

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**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 June 30, 2005 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: August 9, 2005

/s/ BRYCE CHICOYNE

Name: Bryce Chicoyne

Title: Chief Financial Officer

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**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 March 31, 2005 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: August 9, 2005

/s/ CHANE GRAZIANO

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Name: Chane Graziano

Title: Chief Executive Officer

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