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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 March 31, 2013

☐ **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 001-33957

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

Delaware	**04-3306140**
(State or Other Jurisdiction of Incorporation or Organization)	**(IRS Employer Identification No.)**
84 October Hill Road, Holliston, MA	**01746**
(Address of Principal Executive Offices)	**(Zip Code)**

(508) 893-8999
(Registrant's telephone number, including area 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 has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). ☒ YES ☐ NO

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☒
Non-accelerated filer	☐ (Do not check if a smaller reporting company)	Smaller reporting company	☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). ☐ YES ☒ NO

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

As of May 1, 2013, there were 30,062,333 shares of Common Stock, par value $0.01 per share, outstanding.

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HARVARD BIOSCIENCE, INC.

Form 10-Q
For the Quarter Ended March 31, 2013

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PART I. FINANCIAL INFORMATION

Financial Statements.

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

	March 31, 2013	December 31, 2012
Assets		
Current assets:		
Cash and cash equivalents	$ 23,749	$ 20,681
Accounts receivable, net of allowance for doubtful accounts of $221 and $194, respectively	14,186	14,357
Inventories	17,725	17,762
Deferred income taxes	1,551	1,553
Other receivables and other assets	4,672	4,619
Total current assets	61,883	58,972
Property, plant and equipment, net	4,424	4,551
Deferred income taxes	11,126	10,770
Amortizable intangible assets, net	20,423	21,225
Goodwill	35,497	36,200
Other indefinite lived intangible assets	1,266	1,276
Other assets	818	490
Total assets	$135,437	$ 133,484
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 4,429	$ 4,680
Deferred revenue	586	482
Accrued income taxes payable	260	506
Accrued expenses	4,063	3,505
Current portion of long-term debt	3,000	—
Other liabilities—current	778	728
Total current liabilities	13,116	9,901
Long-term debt	12,000	12,950
Deferred income taxes	280	277
Other liabilities—non-current	5,659	6,143
Total liabilities	31,055	29,271
Commitments and contingencies		
Stockholders' equity:		
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; 37,774,590 and 37,123,705 shares issued and 30,029,083 and 29,378,198 shares outstanding, respectively	374	370
Additional paid-in-capital	198,740	196,634
Accumulated deficit	(77,164)	(77,260)
Accumulated other comprehensive loss	(6,900)	(4,863)
Treasury stock at cost, 7,745,507 common shares	(10,668)	(10,668)
Total stockholders' equity	104,382	104,213
Total liabilities and stockholders' equity	$135,437	$ 133,484

HARVARD BIOSCIENCE, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF INCOME AND COMPREHENSIVE (LOSS) INCOME
(Unaudited, in thousands, except per share amounts)

	Three Months Ended March 31,	
	2013	2012
Revenues	$26,086	$28,322
Cost of product revenues	13,820	14,922
Gross profit	12,266	13,400
Sales and marketing expenses	4,752	4,768
General and administrative expenses	5,070	4,861
Research and development expenses	1,944	1,714
Restructuring (credits) charges	(21)	150
Amortization of intangible assets	679	678
Total operating expenses	12,424	12,171
Operating (loss) income	(158)	1,229
Other (expense) income:		
Foreign exchange	34	(41)
Interest expense	(130)	(147)
Interest income	9	14
Other expense, net	(8)	(211)
Other (expense) income, net	(95)	(385)
(Loss) income from continuing operations before income taxes	(253)	844
Income tax (benefit) expense	(169)	315
(Loss) income from continuing operations	(84)	529
Discontinued operations:		
Income from discontinued operations, net of tax	180	—
Total income from discontinued operations, net of tax	180	—
Net income	$ 96	$ 529
Income per share:		
Basic (loss) earnings per common share from continuing operations	$ (0.00)	$ 0.02
Discontinued operations	0.01	—
Basic earnings per common share	$ —	$ 0.02
Diluted (loss) earnings per common share from continuing operations	$ (0.00)	$ 0.02
Discontinued operations	0.01	—
Diluted earnings per common share	$ —	$ 0.02
Weighted average common shares:		
Basic	29,778	28,710
Diluted	29,778	29,673
Comprehensive (loss) income:		
Net income	$ 96	$ 529
Foreign currency translation adjustments	(2,037)	1,262
Total comprehensive (loss) income	$ (1,941)	$ 1,791

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

	Three Months Ended March 31,	
	2013	2012
Cash flows from operating activities:		
Net income	$ 96	$ 529
Adjustments to reconcile net income to net cash provided by operating activities:		
Stock-based compensation expense	649	697
Depreciation	357	317
Earn-out related to discontinued operations	(200)	—
Loss (gain) on sales of fixed assets	1	(3)
Non-cash restructuring credit	(21)	—
Amortization of catalog costs	32	71
Provision for allowance for doubtful accounts	31	—
Amortization of intangible assets	679	678
Amortization of deferred financing costs	—	22
Deferred income taxes	(431)	(104)
Changes in operating assets and liabilities:		
Increase in accounts receivable	(103)	(682)
(Increase) decrease in inventories	(433)	491
Increase in other receivables and other assets	(257)	(54)
Decrease in trade accounts payable	(153)	(442)
Decrease in accrued income taxes payable	(294)	(73)
Increase in accrued expenses	639	204
Increase in deferred revenue	115	117
Decrease in other liabilities	(131)	(163)
Net cash provided by operating activities	576	1,605
Cash flows used in investing activities:		
Additions to property, plant and equipment	(354)	(297)
Proceeds from sales of property, plant and equipment	—	3
Acquisitions, net of cash acquired	—	(2,378)
Net cash used in investing activities	(354)	(2,672)
Cash flows provided by financing activities:		
Proceeds from issuance of debt	2,049	500
Proceeds from issuance of common stock	1,553	267
Net cash provided by financing activities	3,602	767
Effect of exchange rate changes on cash	(756)	248
Increase (decrease) in cash and cash equivalents	3,068	(52)
Cash and cash equivalents at the beginning of period	20,681	17,916
Cash and cash equivalents at the end of period	$23,749	$17,864
Supplemental disclosures of cash flow information:		
Cash paid for interest	$ 68	$ 137
Cash paid for income taxes, net of refunds	$ 606	$ 490

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 (collectively, "Harvard Bioscience," the "Company," "our" or "we") as of March 31, 2013 and for the three months ended March 31, 2013 and 2012 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 ("U.S. GAAP") have been condensed or omitted pursuant to such rules and regulations. The December 31, 2012 consolidated balance sheet was derived from audited financial statements, but does not include all disclosures required by U.S. GAAP. However, the Company believes that the disclosures are adequate to make the information presented not misleading. These unaudited consolidated financial statements should be read in conjunction with the consolidated financial statements and the notes thereto included in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2012, which was filed with the SEC on March 18, 2013.

In the opinion of management, all adjustments, which include normal recurring adjustments necessary to present a fair statement of financial position as of March 31, 2013, results of operations and comprehensive (loss) income for the three months ended March 31, 2013 and 2012 and cash flows for the three months ended March 31, 2013 and 2012, as applicable, have been made. The results of operations for the three months ended March 31, 2013 are not necessarily indicative of the operating results for the full fiscal year or any future periods.

Summary of Significant Accounting Policies

The accounting policies underlying the accompanying unaudited consolidated financial statements are those set forth in Note 2 to the consolidated financial statements included in the Company's Annual Report on Form 10-K for the year ended December 31, 2012, which was filed with the SEC on March 18, 2013.

2. Goodwill and Other Intangible Assets

Intangible assets consist of the following:

	March 31, 2013		December 31, 2012		Weighted Average Life (a)
	(in thousands)				
	Gross	Accumulated Amortization	Gross	Accumulated Amortization	
Amortizable intangible assets:					
Existing technology	$12,882	$ (10,085)	$13,258	$ (10,207)	5.0 Years
Tradename	6,160	(1,868)	6,167	(1,756)	11.6 Years
Distribution agreement/customer relationships	21,607	(8,275)	21,699	(7,938)	11.2 Years
Patents	9	(7)	9	(7)	3.1 Years
Total amortizable intangible assets	$40,658	$ (20,235)	$41,133	$ (19,908)	
Unamortizable intangible assets:					
Goodwill	$35,497		$36,200		
Other indefinite lived intangible assets	1,266		1,276		
Total goodwill and other indefinite lived intangible assets	$36,763		$37,476		

(a) Weighted average life is as of March 31, 2013

The change in the carrying amount of goodwill for the three months ended March 31, 2013 was as follows:

Goodwill rollforward

	(in thousands)
Balance at December 31, 2012	$ 36,200
Effect of change in foreign currencies	(703)
Balance at March 31, 2013	$ 35,497

The balance of goodwill and intangible assets at March 31, 2013 and December 31, 2012 were related to the Life Science Research Tools ("LSRT") segment.

Intangible asset amortization expense was $0.7 million for the three month periods ended March 31, 2013 and 2012. Amortization expense of existing amortizable intangible assets is currently estimated to be $2.6 million for the year ending December 31, 2013, $2.4 million for the year ending December 31, 2014, $2.1 million for the year ending December 31, 2015, $ 2.0 million for the year ending December 31, 2016 and $1.8 million for the year ending December 31, 2017.

3. Inventories

Inventories consist of the following:

	March 31, 2013	December 31, 2012
	(in thousands)	
Finished goods	$ 7,841	$ 8,023
Work in process	764	731
Raw materials	9,120	9,008
Total	$ 17,725	$ 17,762

4. Restructuring and Other Exit Costs

2012 Restructuring Plans

During 2012, the management of Harvard Bioscience initiated a plan to reduce operating expenses at Panlab s.l., its Harvard Apparatus Spain subsidiary.

Activity and liability balances related to these charges were as follows:

	Severance and Related Costs	Other	Total
	(in thousands)		
Restructuring charges	$ 312	$ 11	$ 323
Cash payments	(179)	—	(179)
Restructuring balance at December 31, 2012	133	11	144
Cash payments	(14)	(11)	(25)
Non-cash credits	(21)	—	(21)
Restructuring balance at March 31, 2013	$ 98	$—	$ 98

Aggregate restructuring (credits) charges for the 2012 Restructuring Plan were as follows:

	Three Months Ended March 31,	
	2013	2012
	(in thousands)	
Restructuring (credits) charges	$ (21)	$ 150

5. Discontinued Operations

In November 2007, the Company completed the sale of the assets of its Genomic Solutions Division and the stock of its Belgian subsidiary, MAIA Scientific, both of which were part of its Capital Equipment Business Segment, to Digilab, Inc. The purchase price paid by Digilab under the terms of the Asset Purchase Agreement consisted of $1.0 million in cash plus additional consideration in the form of an earn-out based on 20% of the revenue generated by the acquired business as it is conducted by Digilab over a three-year period post-transaction. Any earn-out amounts were evidenced by interest bearing promissory notes which were due on November 30, 2012. The unpaid principal balance of the promissory notes had an interest of LIBOR plus 1100 basis points per annum. Digilab had delivered promissory notes of $4.6 million. The Company has recorded valuation allowances for 100% of the earn-out promissory notes as their collectability is uncertain. Going forward, the Company will continue to monitor the financial performance of Digilab and recognize any contingent consideration in discontinued operations when and if realization of earn-out amounts is probable. The Company has included the contingent consideration as sale proceeds in its income tax returns. Accordingly, the tax effect of this contingent consideration is included in the Company's deferred tax assets.

In September 2008, the Company completed the sale of assets of its Union Biometrica Division including its German subsidiary, Union Biometrica GmbH, representing at that time the remaining portion of its Capital Equipment Business Segment, to UBIO Acquisition Company. The purchase price paid by UBIO Acquisition Company under the terms of the Asset Purchase Agreement consisted of $1 in cash, the assumption of certain liabilities, plus additional consideration in the form of an earn-out based on the revenue generated by the acquired business as it is conducted by UBIO Acquisition Company over a five-year post-transaction period in an amount equal to (i) 5% of the revenue generated up to and including $6.0 million and (ii) 8% of the revenue generated above $6.0 million each year. Any earn-out amounts are evidenced by interest-bearing promissory notes due on September 30, 2013 or at an earlier date based on certain triggering events. As of March 31, 2013, UBIO Acquisition Company had delivered promissory notes of $1.1 million. The unpaid principal balance of the promissory notes bear an interest of 12% per annum. During the quarter ended March 31, 2013, the Company recorded income from discontinued operations of approximately $0.2 million in its consolidated statements of income under "Income from discontinued operations, net of tax".

6. Warranties

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

	Beginning Balance	Payments	Additions	Ending Balance
		(in thousands)		
Year ended December 31, 2012	$ 144	$ (136)	$ 214	$ 222
Three months ended March 31, 2013	$ 222	$ (25)	$ 47	$ 244

7. 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 March 31,	
	2013	2012
	(in thousands)	
Components of net periodic benefit cost:		
Service cost	$ 74	$ 85
Interest cost	184	198
Expected return on plan assets	(121)	(136)
Net amortization loss	57	51
Net periodic benefit cost	$ 194	$ 198

For the three month periods ended March 31, 2013 and 2012, the Company contributed $0.2 million to its defined benefit plans. The Company expects to contribute approximately $0.7 million to its defined benefit plans during the remainder of 2013.

As of March 31, 2013 and December 31, 2012, the Company had an underfunded pension liability of approximately $5.4 million and $5.9 million respectively, included in the other liabilities- non-current line item in the Consolidated Balance Sheets.

8. Leases

The Company has noncancelable operating leases for office and warehouse space expiring at various dates through 2019.

Rent expense, which is recorded on a straight-line basis, is estimated to be $1.2 million for the year ending December 31, 2013. Rent expense was $ 0.3 million for the three month periods ended March 31, 2013 and 2012. Future minimum lease payments for operating leases, with initial or remaining terms in excess of one year at March 31, 2013, were as follows:

	Operating Leases (in thousands)
2014	$ 1,183
2015	1,014
2016	721
2017	446
2018	158
Thereafter	65
Net minimum lease payments	$ 3,587

9. Capital Stock

Employee Stock Purchase Plan ("ESPP")

In 2000, the Company approved the ESPP. Under the ESPP, participating employees can authorize the Company to withhold a portion of their base pay during consecutive six-month payment periods for the purchase of shares of the Company's common stock. At the conclusion of the period, participating employees can purchase shares of the Company's common stock at 85% of the lower of the fair market value of the Company's common stock at the beginning or end of the period. Shares are issued under the plan for the six-month periods ending June 30 and December 31. Under this plan, 500,000 shares of common stock are authorized for issuance, of which 470,403 shares were issued as of March 31, 2013. During the three months ended March 31, 2013 and 2012, no shares of the Company's common stock were issued under the ESPP.

Stock Option Plans

The Company accounts for share-based payment awards in accordance with the provisions of FASB ASC 718 *"Compensation- Stock Compensation"*, which requires the Company to recognize compensation expense for all share-based payment awards made to employees and directors including employee stock options, restricted stock units ("RSU's") and employee stock purchases related to the ESPP.

Stock option and RSU activity under the Stock Option Plans for the three months ended March 31, 2013 was as follows:

		Stock Options		Restricted Stock Units	
	Available for Grant	Stock Options Outstanding	Weighted Average Exercise Price	Restricted Stock Units Outstanding	Grant Date Fair Value
Balance at December 31, 2012	1,972,956	8,078,509	$ 4.25	677,193	$ 3.97
Granted	—	—	—	—	—
Exercised	—	(447,530)	5.42	—	—
Vested (RSU's)	—	—	—	(219,525)	—
Shares withheld for taxes	24,169	—	—	—	—
Cancelled / forfeited	14,000	(14,000)	5.06	—	—
Balance at March 31, 2013	2,011,125	7,616,979	$ 4.30	457,668	$ 3.96

There were no stock options or RSU's granted during the three months ended March 31, 2013. The weighted average fair value of the options granted under the 2000 Plan during the three months ended March 31, 2012 was $2.14, using the Black Scholes option-pricing model. The following assumptions were used to estimate the fair value of stock options and RSU's granted during three months ended March 31, 2012:

	Three Months Ended March 31, 2012
Volatility	55.52%
Risk-free interest rate	1.17%
Expected holding period (in years)	6.01
Dividend Yield	0%

The Company used historical volatility to estimate the expected stock price volatility assumption. Historical volatility was determined by calculating the mean reversion of the daily-adjusted closing stock price. The risk-free interest rate assumption is based upon observed U.S. Treasury bill interest rates (risk free) appropriate for the term of the Company's employee stock options. The expected holding period of employee stock options represents the period of time options are expected to be outstanding and is based on historical experience. The vesting period is approximately 4 years and the contractual life is 10 years.

Stock-based compensation expense for the three months ended March 31, 2013 and 2012 consisted of stock-based compensation expense related to employee stock options, RSUs and the ESPP.

Stock-based compensation expense for the three months ended March 31, 2013 and 2012, respectively, was allocated as follows:

	Three Months Ended March 31,	
	2013	2012
	(in thousands)	
Cost of product revenues	$ 12	$ 16
Sales and marketing	54	61
General and administrative	576	614
Research and development	7	6
Total stock-based compensation	$ 649	$ 697

The Company did not capitalize any stock-based compensation.

Weighted Average Common Shares Outstanding

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 March 31,	
	2013	2012
Basic	29,778,104	28,709,758
Effect of assumed conversion of employee and director stock options and restricted stock units	—	962,997
Diluted	29,778,104	29,672,755

Diluted loss per share from continuing operations for the three months ended March 31, 2013 was based on the basic weighted-average number of shares outstanding during the period, as the inclusion of any common stock equivalents would have been anti-dilutive. Excluded from the shares used in calculating the diluted earnings per common share in the above table are options to purchase approximately 7,616,979 and 4,232,539 shares of common stock for the three months ended March 31, 2013 and 2012, respectively, as the impact of these shares would be anti-dilutive.

10. Revolving Credit Facility

On August 7, 2009, the Company entered into an amended and restated $20.0 million revolving credit loan agreement with Bank of America, as agent, and Bank of America and Brown Brothers Harriman & Co as lenders.

On March 29, 2013, the Company entered into a Second Amended and Restated Revolving Credit Agreement (the "Credit Agreement") with Bank of America, as agent, and Bank of America and Brown Brothers Harriman & Co as lenders. The Credit Agreement converted the Company's existing outstanding revolving advances into a term loan in the principal amount of $15 million (the "Term Loan"), provides a revolving credit facility in the maximum principal amount of $25 million ("Revolving Line") and provides a delayed draw term loan of up to $15 million (the "DDTL") to fund capital contributions to the Company's subsidiary, Harvard Apparatus Regenerative Technology, Inc., ("HART"). The Revolving Line, Term Loan and DDTL are collectively referred to herein as the "Loans" and have a maturity date of March 29, 2016, March 29, 2018, and March 29, 2018, respectively.

Borrowings under the Term Loan and the DDTL shall bear interest at a rate based on either the effective London Interbank Offered Rate (LIBOR) for certain interest periods selected by the Company, or a daily floating rate based on the BBA LIBOR as published by Reuters (or other commercially available source providing quotations of BBA LIBOR), plus in either case, a margin of 3.0%. The Revolving Line shall bear interest at a rate based on either the effective LIBOR for certain interest periods selected by the Company, or a daily floating rate based on the BBA LIBOR, plus in either case, a margin of 2.5%. The Company will be required to fix the rate of interest on at least 50% of the Term Loan and the DDTL through the purchase of interest rate swaps. The Term Loan and DDTL each have interest payments due at the end of the applicable LIBOR period, or monthly with respect to BBA LIBOR borrowings, and principal payments due quarterly. The Revolving Line has interest payments due at the end of the applicable LIBOR period, or monthly with respect to BBA LIBOR borrowings.

The Loans are guaranteed by all of the Company's direct and indirect domestic subsidiaries, excluding HART, and secured by substantially all of the assets of the Company and the guarantors. The Loans are subject to restrictive covenants under the Credit Agreement, and financial covenants that require the Company and its subsidiaries to maintain certain financial ratios on a consolidated basis, including a maximum leverage, minimum fixed charge coverage and minimum working capital. Prepayment of the Loans are allowed by the Credit Agreement at any time during the terms of the Loans. The Loans also contain limitations on the Company's ability to incur additional indebtedness and requires lender approval for acquisitions funded with cash, promissory notes and/or other consideration in excess of $6.0 million and for acquisitions funded solely with equity in excess of $10.0 million.

As of March 31, 2013 and December 31, 2012, the Company had borrowings of $15.0 million and $13.0 million, respectively, outstanding under its Credit Agreement. As of March 31, 2013, the Company was in compliance with all financial covenants contained in the credit agreement; the Company was not subject to any borrowing restrictions under the financial covenants and had available borrowing capacity under its revolving line of $25.0 million.

11. Income Tax

Income tax was a $0.2 million benefit and a $0.3 million expense, respectively for the three months ended March 31, 2013 and 2012, respectively. The effective income tax rate was 66.8% benefit and 37.3% expense for the three months ended March 31, 2013 and 2012, respectively. The effective tax rate for the three months ended March 31, 2013 included benefits related to foreign tax rate differential, research and development tax credits and stock compensation exercises, as well as offsetting discrete expense items related to non-deductible costs. The effective income tax rate for the three months ended March 31, 2012 included discrete expense items related to acquisition costs and stock-based compensation expense, offset by benefits related to foreign tax rate differential and research and development tax credits.

12. Segment Reporting

The Company has two reportable segments, namely the LSRT segment and the Regenerative Medicine Device ("RMD") segment. The Company has two operating segments aggregated under the LSRT segment. These operating segments have similar products and services, customer channels, distribution methods and historical margins. The LSRT segment is engaged in the development, manufacture and marketing of specialized products, primarily apparatus and scientific instruments, used to advance life science research at pharmaceutical and biotechnology companies, universities and government laboratories worldwide.

The RMD segment is engaged in the development, manufacturing and marketing of devices used by clinicians and researchers in the field of regenerative medicine.

Non operating expenses that are not allocated to operating divisions are under the caption “Unallocated Expenses”. Unallocated expenses also include certain corporate related expenses that are not allocable to the operating segments.

Summarized financial information on the Company’s reportable segments for the three months ended March 31, 2013 and 2012 are shown in the following table. There were no inter segment revenues.

	LSRT	RMD	Unallocated	Total
		(in thousands)		
Three months ended March 31, 2013				
Total revenues	$ 26,086	$ —	$ —	$ 26,086
Operating income (loss)	3,181	(2,210)	(1,129)	(158)
Income (loss) before income taxes	3,073	(2,210)	(1,116)	(253)
Total assets	134,714	417	306	135,437
Three months ended March 31, 2012				
Total revenues	28,322	—	—	28,322
Operating income (loss)	3,634	(1,184)	(1,221)	1,229
Income (loss) before income taxes	3,253	(1,184)	(1,225)	844
Total assets	130,926	179	402	131,507

13. Subsequent Events

On April 9, 2013, the Company postponed its planned initial public offering (“IPO”) of its wholly owned subsidiary HART. On May 1, 2013, the Company announced its intentions not to proceed with the planned IPO of HART. The Company withdrew the Registration Statement on Form S-1 of HART, as initially filed with the Securities and Exchange Commission on December 11, 2012. The registration statement was not yet declared effective.

As of March 31, 2013 and December 31, 2012, the Company had recorded IPO related costs of approximately $0.7 million and $0.4 million, respectively, in its consolidated balance sheets under “Other assets”. The total amount recorded as of March 31, 2013 of $0.7 million will be expensed in the consolidated statements of income during the second quarter of 2013.

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 “Exchange Act”). 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, 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,” “goals,” “sees,” “estimates,” “projects,” “predicts,” “intends,” “think,”“potential,” “objectives,” “optimistic,” “strategy,” 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. Factors that may cause the Company’s actual results to differ materially from those in the forward-looking statements include the Company’s failure to identify potential acquisition candidates, successfully integrate acquired businesses or technologies, successfully negotiate favorable pricing and other terms with acquisition candidates to enable potential acquisitions to close, complete consolidations of

business functions, expand our distribution channels, expand our product offerings, introduce new products or commercialize new technologies on a timely basis, including in the field of regenerative medicine, unanticipated costs relating to acquisitions, unanticipated costs arising in connection with the Company's consolidation of business functions and any restructuring initiative, lack of demand or decreased demand for the Company's products due to changes in our customers' needs, success of our efforts with our distributors to promote sales of our microvolume spectrophotometer products and success of our strategies to increase the sales of other products, our ability to obtain regulatory approvals, including FDA approval, for our products including any products in the field of regenerative medicine, the current size or anticipated size of the regenerative medicine market, the existence and size of opportunities in the regenerative medicine market, our financial position, general economic outlook, or other circumstances, overall economic trends, the seasonal nature of purchasing in Europe, economic, political and other risks associated with international revenues and operations, the impact of the current global economic and financial uncertainty, additional costs of complying with recent changes in regulatory rules applicable to public companies, our ability to manage our growth, our ability to retain key personnel, competition from our competitors, technological changes resulting in our products becoming obsolete, future changes to the operations or the activities of our subsidiaries due to manufacturing consolidations, our ability to meet the financial covenants contained in our credit facility, our ability to protect our intellectual property and operate without infringing on others' intellectual property, potential costs of any lawsuits to protect or enforce our intellectual property, economic and political conditions generally and those affecting pharmaceutical and biotechnology industries, research funding levels from endowments at our university customers, impact of any impairment of our goodwill or intangible assets, our acquisition of Genomic Solutions failing to qualify as a tax-free reorganization for federal tax purposes, our ability to utilize deferred tax assets after the release of our valuation allowances, the amount of earn-out consideration that the Company receives in connection with the disposition of the Company's Capital Equipment Business segment and factors that may impact the receipt of this consideration, such as the revenues of the businesses disposed of, plus factors described under the heading "Item 1A. Risk Factors" in this Quarterly Report on Form 10-Q for the quarter ended March 31, 2013. Our results may also be affected by factors of which we are not currently aware. 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.

General

Harvard Bioscience consists of a Life Science Research Tools ("LSRT") business and a Regenerative Medicine Device ("RMD") business.

Our LSRT strategy is to have a broad range of highly specialized but relatively inexpensive products that have strong positions in niche markets in life science research. We believe that:

- Having a broad product offering reduces the risk of being dependent on a single technology;
- Having relatively inexpensive products reduces the volatility associated with expensive capital equipment; and
- Focusing on niche markets reduces head-to-head competition with the major instrument companies.

We seek to grow this range of products through a combination of organic growth driven by internal development of new products, direct marketing, distribution channel expansion and the acquisition of closely related products. We use acquisitions to expand our product offerings because we believe we can use our well-established brands and distribution channels to accelerate the growth of these acquired products. We also believe that our expertise in operational management frequently allows us to improve profitability at acquired companies.

In addition to driving growth in our core research markets, we have been investing to create new products to address what we believe is a long term growth opportunity in the emerging field of regenerative medicine. Regenerative medicine is using stem cells to repair damaged organs and to grow organs outside the body for transplant. The U.S. Department of Health and Human Services has projected that the U.S. market for regenerative medicine may be $100 billion in the coming years. The government's estimate appears to include the value of all regenerative medicine protocols and therapies, including potential cost savings versus current methodologies.

Our strategy in regenerative medicine is not to become a therapeutics company but instead to provide devices to researchers and clinicians in the field of regenerative medicine. These new devices currently fall into two main categories: bioreactors and synthetic scaffolds for growing tissue and organs outside the body; and injectors for stem cell therapy. These new devices we are creating are being built on our existing technologies – such as our market leading Harvard Apparatus precision syringe pumps and market leading Hugo-Sachs isolated organ systems.

Our strategy in our RMD business is to create devices in collaboration with leading surgeons, not to discover pharmaceuticals, as creating devices like the "InBreath" bioreactor reduces risk compared to trying to discover new drugs; build these devices using our existing technologies and brands as this reduces the investment needed to get to market; and develop devices with significant medical value to allow us to participate on a per-procedure basis.

Our first regenerative medicine tool, the “InBreath” hollow organ bioreactor, was used to perform the world’s first human transplant of a regenerated bronchus. Dr. Paolo Macchiarini et al reported this success in The Lancet, a leading general medicine journal, in November 2008. We have licensed this product from Dr. Macchiarini’s team, and worked to make it a commercial device. We first took orders for this product during 2010, making it what we believe is the world’s first commercially available bioreactor that has been used to perform a human transplant of a regenerated organ. We believe it marks an important milestone in the development of the regenerative medicine field as the devices evolve from concepts to commercial quality products.

During the first half of 2010, one of our collaborators, Dr. Harald Ott at Massachusetts General Hospital (“MGH”) succeeded in regenerating a lung and subsequently transplanting it into a rat. In collaboration with Dr. Ott and MGH, we designed and developed a novel bioreactor, the LB-2 Solid organ bioreactor, that was used to grow the lung. The work was published online in Nature Medicine in July 2010. The bioreactor used by Dr. Ott was a modified version of one of our market leading Hugo-Sachs isolated organ systems.

In June 2011, the “InBreath” bioreactor was used for the world’s first successful transplantation of a synthetic tissue engineered windpipe. For the first time in history, a patient was given a new trachea made from a synthetic scaffold seeded with his own stem cells in a bioreactor. The cells were grown on the scaffold inside the bioreactor for two days before transplantation into the patient. Because the cells used to regenerate the trachea were the patient’s own, there has been no rejection of the transplant, and the patient is not taking immunosuppressive drugs. The patient had been suffering from late stage trachea cancer, which before this surgery would have been inoperable, and is now alive and well almost two years after the surgery. The operation was performed at the Karolinska University Hospital in Huddinge, Stockholm, by Dr. Paolo Macchiarini of the Karolinska University Hospital and Karolinska Institutet, and colleagues. Dr. Macchiarini led an international team which included people who designed and built the nanocomposite trachea scaffold, and we produced a specifically designed bioreactor used to seed the scaffold with the patient’s own stem cells. The success of this transplant surgery was published in The Lancet on November 24, 2011.

In November 2011, a second patient was given a new trachea made from a synthetic scaffold seeded with his own stem cells in a bioreactor. The patient had been suffering from late stage trachea cancer. The patient was discharged from the hospital in January 2012. On March 5, 2012, this patient died. The official cause of death recorded on the death certificate was pneumonia secondary to trachea cancer. We know of no evidence that either the scaffold or the bioreactor played any part in the patient’s death.

In June 2012, the “InBreath” bioreactors were used for the world’s first and second successful laryngotracheal implants, using synthetic laryngotracheal scaffolds seeded with cells taken from the patients’ bone marrow. The surgeries took place at Krasnodar Regional Hospital in Krasnodar, Russia on June 19th and June 21st. Each bioreactor was loaded with a synthetic scaffold in the shape of the patient’s original organ. The scaffolds were then seeded with the patient’s own stem cells. Over the course of about two days, the bioreactor promoted proper cell seeding and development. Because the patients’ own stem cells were used, their bodies have accepted the transplants without the use of immunosuppressive drugs. The recipients of the implants are alive eleven months after the surgeries. These surgeries are a part of a clinical trial funded under a $4.8 million grant provided by the Russian government to the Krasnodar Regional Hospital. The first transplant was filmed and that documentary has been broadcast on European television under the title of “The Miracle of Krasnodar”.

In addition to the Russian clinical trial, a European clinical trial in trachea cancer patients is expected to start in 2014. The European clinical trial is expected to enroll approximately 25 patients. This project is a consortium of European companies, hospitals and universities, and is led by Dr. Macchiarini.

In April 2013 our “InBreath” tracheal scaffold and bioreactor system was used in the first successful transplant of a regenerated trachea in the United States. The recipient of the implant, two-year-old Hannah Genevieve Warren, is recovering at Children’s Hospital of Illinois, where the surgery was performed on April 9, 2013. The surgery was also the world’s first successful pediatric regenerated trachea transplant using a synthetic scaffold. Hannah was born on August 22, 2010 in Seoul, South Korea with tracheal agenesis (lack of a trachea), and was only able to breathe through a tube inserted in her esophagus that connected to her lungs. Tracheal agenesis is 100 percent fatal, and children born with the condition typically die shortly after birth. Hannah had lived in the intensive care unit for two and a half years at Seoul National Hospital before being transported to Illinois for the surgery. This was the first regenerated trachea transplant surgery using a scaffold manufactured by our wholly owned subsidiary Harvard Apparatus Regenerative Technology, Inc. (“HART”), and the implant used in the procedure was grown in one of HART’s “InBreath” bioreactors. The scaffold and bioreactor were custom-made to Hannah’s dimensions. The scaffold was seeded with bone marrow cells taken from the patient and incubated in the bioreactor for two days prior to implant. Because Hannah’s own cells were used, her body has accepted the transplant without the use of immunosuppressive (anti-rejection) drugs. The procedure was performed by a team led by Dr. Paolo Macchiarini of Karolinska University Hospital and Karolinska Institutet in Huddinge, Stockholm and Drs. Mark J. Holterman and Richard Pearl, both of Children’s Hospital of Illinois. The surgery was approved by the FDA under an Investigational New Drug application made by Dr. Holterman. This surgery was the seventh successful implant of a regenerated trachea in a human using HART technology. HART intends to begin discussions with the FDA and EU regulatory authorities in the near future regarding the clinical pathway necessary to bring this new therapeutic approach to a wider range of patients in need of a trachea transplant.

Separation of Business

We believe that the best path to maximizing value for our shareholders is to spin-off our RMD business from our profitable core LSRT business. In connection with the planned spin-off, HART filed a Registration Statement on Form S-1 on December 11, 2012 with the intent of consummating an initial public offering of its common stock. However, HART elected to withdraw its Form S-1 on May 1, 2013 and not proceed with its planned initial public offering. Instead, we will proceed with the spin-off of HART following the effectiveness of a Registration Statement on Form 10 to be filed by HART with the SEC to become a public reporting company under the Securities Exchange Act of 1934. We expect the shares of HART common stock distributed in the spin-off to be publically tradable, subject to compliance with applicable securities laws.

We intend to effect the separation of our regenerative medicine business through the spin-off of 100% of HART's common stock to our stockholders in a pro-rata, tax-free dividend. Prior to such spin-off, we plan to contribute $15.0 million in cash to fund HART's initial operations. We also intend to apply to list HART's common stock on the NASDAQ Capital Market under the symbol "HART" in connection with the spin-off and related Form 10 filing. Following the effectiveness of the Registration Statement on Form 10 and the listing of HART's common stock on NASDAQ, we and HART will operate, and our common stock will trade, as two separate, public companies.

Financing

On August 7, 2009, we entered into an amended and restated $20.0 million revolving credit loan agreement with Bank of America, as agent, and Bank of America and Brown Brothers Harriman & Co as lenders.

On March 29, 2013, we entered into a Second Amended and Restated Revolving Credit Agreement (the "Credit Agreement") with Bank of America, as agent, and Bank of America and Brown Brothers Harriman & Co as lenders. The Credit Agreement converted our existing outstanding revolving advances into a term loan in the principal amount of $15 million (the "Term Loan"), provides a revolving credit facility in the maximum principal amount of $25 million ("Revolving Line") and provides a delayed draw term loan of up to $15 million (the "DDTL") to fund capital contributions to HART, our subsidiary. The Revolving Line, Term Loan and DDTL are collectively referred to herein as the "Loans" and have a maturity date of March 29, 2016, March 29, 2018, and March 29, 2018, respectively.

Borrowings under the Term Loan and the DDTL shall bear interest at a rate based on either the effective London Interbank Offered Rate (LIBOR) for certain interest periods selected by us, or a daily floating rate based on the BBA LIBOR as published by Reuters (or other commercially available source providing quotations of BBA LIBOR), plus in either case, a margin of 3.0%. The Revolving Line shall bear interest at a rate based on either the effective LIBOR for certain interest periods selected by us, or a daily floating rate based on the BBA LIBOR, plus in either case, a margin of 2.5%. We will be required to fix the rate of interest on at least 50% of the Term Loan and the DDTL through the purchase of interest rate swaps. The Term Loan and DDTL each have interest payments due at the end of the applicable LIBOR period, or monthly with respect to BBA LIBOR borrowings, and principal payments due quarterly. The Revolving Line has interest payments due at the end of the applicable LIBOR period, or monthly with respect to BBA LIBOR borrowings.

The Loans are guaranteed by all of our direct and indirect domestic subsidiaries, excluding HART, and secured by substantially all of our assets and the guarantors. The Loans are subject to restrictive covenants under the Credit Agreement, and financial covenants that require us and our subsidiaries to maintain certain financial ratios on a consolidated basis, including a maximum leverage, minimum fixed charge coverage and minimum working capital. Prepayment of the Loans are allowed by the Credit Agreement at any time during the terms of the Loans. The Loans also contain limitations on our ability to incur additional indebtedness and requires lender approval for acquisitions funded with cash, promissory notes and/or other consideration in excess of $6.0 million and for acquisitions funded solely with equity in excess of $10.0 million. 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 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 thereof.

As of March 31, 2013 and December 31, 2012, we had borrowings of $15.0 million and $13.0 million, respectively, outstanding under our Credit Agreement.

Components of Operating Income

Revenues. We generate revenues by selling apparatus, instruments, devices and consumables through our catalogs, our distributors, our direct sales force and our website. For products primarily priced under $10,000, we typically distribute a new, comprehensive catalog every one to three years, 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 distribute catalog supplements that promote selected areas of our catalog or new products to targeted subsets of our customer base. Future editions of our comprehensive catalog and our catalog supplements will be timed at least in part with the incidence of new product introductions. Our end user customers are research scientists at pharmaceutical and biotechnology companies,

universities and government laboratories. Revenue from catalog sales in any period is influenced by the amount 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 2010, with approximately 850 pages, 11,000 products and approximately 65,000 copies printed. Revenues from direct sales to end users represented approximately 56% and 57%, respectively, of our revenues for the three months ended March 31, 2013 and for the year ended December 31, 2012.

Products sold under brand names of distributors, including GE Healthcare, 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 three months ended March 31, 2013 and for the year ended December 31, 2012, approximately 44% and 43%, respectively, of our revenues were derived from sales to distributors.

For the three months ended March 31, 2013, approximately 66% of our revenues were derived from products we manufacture; approximately 25% were derived from distributed products sold under our brand names and approximately 9% 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 year ended December 31, 2012, approximately 67% of our revenues were derived from products we manufacture; approximately 23% were derived from distributed products sold under our brand names and approximately 10% were derived from complementary products we distribute in order to provide the researcher with a single source for all equipment needed to conduct a particular experiment.

For the three months ended March 31, 2013 and for the year ended December 31, 2012, approximately 39% and 41%, respectively, of our revenues were derived from sales made by our non-U.S. operations. A large portion of our international sales during these periods consisted of sales to GE Healthcare, the distributor for our spectrophotometers and plate readers. GE Healthcare distributes these products to customers around the world, including to many customers in the United States, from its distribution center in Upsalla, Sweden. As a result, we believe our international sales would have been a lower percentage of our revenues if we had shipped our products directly to our end-users. Changes in the relative proportion of our revenue sources between catalog sales, direct sales and distribution sales are primarily the result of a different sales proportion of acquired companies.

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 a higher cost of product revenues as a percent of revenue 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.

Sales and marketing expenses. 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 catalogs, supplements and the maintenance of our websites. We may from time to time expand our marketing efforts by employing additional technical marketing specialists in an effort to increase sales of selected categories of products in our catalog. We may also from time to time expand our direct sales organizations in an effort to concentrate on key accounts or promote certain product lines.

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

Research and development expenses. Research and development expense consists primarily of salaries and related expenses for personnel and spending to develop and enhance our products. 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 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 for existing markets. Additionally, we are working to develop new products aimed at long term opportunities in the emerging field of regenerative medicine.

Stock-based compensation expenses. Stock-based compensation expense recognized under FASB ASC 718, "*Compensation – Stock Compensation,*" was related to employee stock options, RSUs and the employee stock purchase plan and was recorded as a component of cost of product revenues, sales and marketing expenses, general and administrative expenses and research and development expenses.

Bookings and Backlog

We monitor bookings and backlog as these are indicators of future revenue and business activity levels. Bookings were $25.6 million and $29.0 million for three months ended March 31, 2013 and 2012, respectively. Bookings in the first quarter were disappointing as we saw delays in spending due to sequestration cuts in the U.S. We also experienced some softness in the European markets as business with GE Healthcare was below our expectations. Although bookings were down 12% in the first quarter of 2013 compared with the first quarter of 2012, the negative comparison was not as severe as it might appear since the first quarter last year was a record quarter with strong organic growth in our life science research tools business. Therefore, it was a difficult year-to-year comparison.

Backlog decreased by $1.4 million, or 23.9% to $4.5 million onMarch 31, 2013 compared with $5.9 million on March 31, 2012. The decrease was primarily due to weak bookings during the three months ended March 31, 2013 as described above. This had a negative impact on our first quarter 2013 revenue performance.

Selected Results of Operations

Three months ended March 31, 2013 compared to three months ended March 31, 2012:

	Three Months Ended March 31,			
	2013	2012	Dollar Change	% Change
	(dollars in thousands, unaudited)			
Revenues	$26,086	$28,322	$(2,236)	-7.9%
Cost of product revenues	13,820	14,922	(1,102)	-7.4%
Gross margin percentage	47.0%	47.3%	N/A	-0.6%
Sales and marketing expenses	4,752	4,768	(16)	-0.3%
General and administrative expenses	5,070	4,861	209	4.3%
Research and development expenses	1,944	1,714	230	13.4%

Revenues.

Revenues decreased $2.2 million, or 7.9%, to $26.1 million for the three months ended March 31, 2013 compared to $28.3 million for the same period in 2013. Our acquisition of AHN contributed approximately $0.3 million to first quarter 2013 revenues. The effect of a stronger U.S. dollar decreased our first quarter revenues by $0.1 million, or 0.3%, compared with the same period in 2012. Adjusting for the effect of foreign currency fluctuation and acquisitions, revenues were down $2.4 million, or 8.5%, year-to-year. The organic revenue decline was concentrated in our Harvard Apparatus, Biochrom, and Hoefer businesses.

Cost of product revenues.

Cost of product revenues decreased $1.1 million, or 7.4%, to $13.8 million for the three months ended March 31, 2013 compared with $14.9 million for the three months ended March 31, 2012. Gross profit as a percentage of revenues decreased to 47.0% for the three months ended March 31, 2013 compared with 47.3% for the same period in 2012. The decrease in gross profit as a percentage of revenues was primarily due to a lower sales volume and a less favorable sales mix in the first quarter of 2013 compared with the first quarter of 2012.

Sales and marketing expense.

Sales and marketing expenses were flat at $4.8 million for the three months ended March 31, 2013 and 2012. In LSRT, sales and marketing expenses decreased $0.1 million, or 1.3% to $4.5 million, compared to $4.6 million for the three months ended March 31, 2012. In RMD, sales and marketing expenses increased $0.1 million primarily due to an increase in business development efforts.

General and administrative expense.

General and administrative expenses increased $0.2 million, or 4.3%, to $5.1 million for the three months ended March 31, 2013 compared with $4.9 million for the three months ended March 31, 2012. In LSRT, general and administrative expenses decreased $0.5 million, or 10.9%, to $4.0 million, compared to $4.5 million for the three months ended March 31, 2012 primarily due to lower administrative costs across our core LSRT businesses and the recovery of $0.1 million of Hurricane Sandy business interruption costs at our Denville Scientific business. In RMD, general and administrative expenses increased $0.7 million due to increased activity in our regenerative medicine device initiative.

Research and development expense.

Research and development expenses increased $0.2 million, or 13.4%, to $1.9 million for the three months ended March 31, 2013 compared with $1.7 million for the same period in 2012. In LSRT, research and development expenses remained flat at $1.0 million for the three months ended March 31, 2013 and 2012. In RMD, research and development expenses increased $0.3 million due to increased activity in our bioreactor development initiatives.

Amortization of intangible assets.

Amortization of intangible asset expenses remained flat at $0.7 million for the three months ended March 31, 2013 and 2012.

Other (expense) income, net.

Other expense and income, net, was $0.1 million expense and $0.4 million expense for the three months ended March 31, 2013 and 2012, respectively. Net interest expense was flat at $0.1 million for the three months ended March 31, 2013 and 2012. Other expense and income, net, for the three months ended March 31, 2012 included $0.2 million of acquisition related expenses.

Income tax (benefit) expense.

Income tax (benefit) expense was $169,000 benefit and $315,000 expense for the three months ended March 31, 2013 and 2012, respectively. The effective income tax rate for continuing operations was 66.8% benefit for the three months ended March 31, 2013, compared with 37.3% expense for the same period in 2012. The effective tax rate for the first quarter of 2013 included benefits related to foreign tax rate differential, research and development tax credits and stock compensation exercises, as well as offsetting discrete expense items related to non-deductible costs. The effective income tax rate for the three months ended March 31, 2012 included discrete expense items related to acquisition costs and stock-based compensation expense offset by benefits related to foreign tax rate differential and research and development tax credits.

Liquidity and Capital Resources

Historically, we have financed our business through cash provided by operating activities, issuance of common stock and bank borrowings. Our liquidity requirements have arisen primarily from investing activities, including the funding of acquisitions and capital expenditures.

We ended the first quarter of 2013 with cash and cash equivalents of $23.7 million compared to $20.7 million at December 31, 2012. As of March 31, 2013 and December 31, 2012, we had $15.0 million and $13.0 million, respectively, of borrowings outstanding under our Credit Agreement. Total cash and cash equivalents, net of debt was $8.7 million and $7.7 million at March 31, 2013 and December 31, 2012, respectively.

As of March 31, 2013 and December 31, 2012, cash and cash equivalents held by our foreign subsidiaries was $19.0 million and $19.2 million, respectively. These funds are not available for domestic operations unless the funds are repatriated. If we planned to or did repatriate these funds then U.S. federal and state income taxes would have to be recorded on such amounts. We currently have no plans and do not intend to repatriate any of our undistributed foreign earnings. These balances are considered permanently reinvested and will be used for foreign items including foreign acquisitions, capital investments and operations. It is impracticable to estimate the total tax liability, if any, which would be created by the future distribution of these earnings. In February 2012, we acquired all issued and outstanding shares of AHN, a German manufacturer, and utilized approximately $2.0 million of our foreign cash on hand. During 2012, we used approximately $0.6 million of our foreign cash on hand for capital improvements at this subsidiary. During 2013, we plan to use approximately $1.3 million additional foreign cash on hand for capital improvements at this subsidiary.

Condensed Cash Flow Statements
(in thousands, unaudited)

	Three Months Ended March 31,	
	2013	2012
Cash flows from operations:		
Net income	$ 96	$ 529
Other adjustments to operating cash flows	1,097	1,678
Changes in assets and liabilities	(617)	(602)
Net cash provided by operating activities	576	1,605
Investing activities:		
Acquisition, net of cash acquired	—	(2,378)
Other investing activities	(354)	(294)
Net cash used in investing activities	(354)	(2,672)
Financing activities:		
Proceeds from issuance of debt	2,049	500
Other financing activities	1,553	267
Net cash provided by financing activities	3,602	767
Effect of exchange rate changes on cash	(756)	248
Increase (decrease) in cash and cash equivalents	$3,068	$ (52)

Our operating activities generated cash of $0.6 million for the three months ended March 31, 2013 compared to $1.6 million for the three months ended March 31, 2012. The decrease in cash flows from operations was primarily due to changes in deferred taxes and lower net income from continuing operations year to year.

Our investing activities used cash of $0.4 million during the three months ended March 31, 2013 compared to $2.7 million during the three months ended March 31, 2012. Investing activities during 2013 included purchases of property, plant and equipment. Investing activities during 2012 included acquisition of businesses and purchases and sales of property, plant and equipment. In February 2012, we acquired AHN for approximately $2.0 million. This acquisition was funded from our existing cash balances and is included in “Acquisitions, net of cash acquired” under investing activities. We spent $0.4 million and $0.3 million in the three months ended March 31, 2013 and 2012 on capital expenditures, respectively. We currently expect to make approximately $2.0 million of capital expenditures during the remainder of 2013.

Our financing activities have historically consisted of borrowings and repayments under a revolving credit agreement, long-term debt, the issuance of common stock, including the common stock issued in our initial public offering, and repurchases of our common stock under our stock repurchase program. During the three months ended March 31, 2013, financing activities generated cash of $3.6 million, compared to $0.8 million during the three months ended March 31, 2012. During the three months ended March 31, 2013 and 2012 we borrowed $2.0 million and $0.5 million, respectively, of debt under our Credit Agreement. Other financing activities for the three months ended March 31, 2013 and 2012 included the net proceeds from the issuance of common stock of $1.6 million and $0.3 million, respectively.

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 12 months and beyond. We are also currently exploring strategic alternatives to fund our RMD business going forward in the event that we decide not to proceed with the spin-off of HART. This may involve incurring additional debt or raising equity capital for this business. Additional capital raising activities would dilute the ownership interests of existing stockholders to the extent we raise capital by issuing equity securities and we cannot assure you 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 British pound sterling, the Euro and the Swedish krona.

Changes in foreign currency exchange rates resulted in decreases in revenues of $0.1 million and expenses of $38,000 during the three months ended March 31, 2013. Changes in foreign currency exchange rates resulted in decreases in revenues and expenses of $0.3 million during the three months ended March 31, 2012.

The loss associated with the translation of foreign subsidiaries equity into U.S. dollars included as a component of comprehensive income, was approximately $2.0 million during the three months ended March 31, 2013 compared to a gain of $1.3 million during the three months ended March 31, 2012. In addition, currency exchange rate fluctuations included as a component of net (loss) income resulted in approximately $34,000 currency gains during the three months ended March 31, 2013 compared to $41,000 losses during the three months ended March 31, 2012.

Critical Accounting Policies

The critical accounting policies underlying the accompanying unaudited consolidated financial statements are those set forth in Part II, Item 7 included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2012 which was filed with the SEC on March 18, 2013.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

The majority of our manufacturing and testing of products occurs in our facilities in the United States, the United Kingdom, Germany, Sweden and Spain. 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.

We are exposed to market risk from changes in interest rates primarily through our financing activities. As of March 31, 2013, we had $15.0 million outstanding under our Credit Agreement. On March 29, 2013, we entered into the Credit Agreement with Bank of America, as agent, and Bank of America and Brown Brothers Harriman & Co as lenders. The purpose of the Credit Agreement was to convert our existing outstanding revolving advances into a Term Loan in the principal amount of $15 million, provide a Revolving Line facility in the maximum principal amount of $25 million, and provide a DDTL of up to $15 million to fund capital contributions to our subsidiary, HART. These Loans have a maturity date of March 29, 2016, March 29, 2018, and March 29, 2018, respectively.

Borrowings under the Term Loan and the DDTL shall bear interest at a rate based on either the effective London Interbank Offered Rate (LIBOR) for certain interest periods selected by us, or a daily floating rate based on the BBA LIBOR as published by Reuters (or other commercially available source providing quotations of BBA LIBOR), plus in either case, a margin of 3.0%. The Revolving Line shall bear interest at a rate based on either the effective LIBOR for certain interest periods selected by us, or a daily floating rate based on the BBA LIBOR, plus in either case, a margin of 2.5%. We will be required to fix the rate of interest on at least 50% of the Term Loan and the DDTL through the purchase of an interest rate swap. The Term Loan and DDTL each have interest payments due at the end of the applicable LIBOR period, or monthly with respect to BBA LIBOR borrowings, and principal payments due quarterly. The Revolving Line has interest payments due at the end of the applicable LIBOR period, or monthly with respect to BBA LIBOR borrowings.

At March 31, 2013, the interest rate on our debt was 3.20%. Assuming no other changes which would affect the margin of the interest rate under our revolving credit facility, the effect of interest rate fluctuations on outstanding borrowings under our revolving credit facility as of March 31, 2013 over the next twelve months is quantified and summarized as follows:

If compared to the rate as of March 31, 2013	**Interest expense increase** (in thousands)
Interest rates increase by 1%	$ 150
Interest rates increase by 2%	$ 300

Item 4. Controls and Procedures.

Disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) are designed to ensure that information required to be disclosed in reports filed or submitted under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in SEC rules and forms and that such information is accumulated and communicated to management, including the Chief Executive Officer and the Chief Financial Officer, to allow timely decisions regarding required disclosures.

As required by Rules 13a-15(e) and 15d-15(e) under the Exchange Act, our management, under the supervision and with the participation of our Chief Executive Officer and Chief Financial Officer, conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures as of March 31, 2013. Our disclosure controls and procedures are designed to provide reasonable assurance that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and our management necessarily was required to apply its judgment in evaluating and implementing our disclosure controls and procedures. Based upon the evaluation described above, our Chief Executive Officer and Chief Financial Officer have concluded that they believe that our disclosure controls and procedures were effective, as of the end of the period covered by this Quarterly Report on Form 10-Q, in providing reasonable assurance that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, to allow timely decisions regarding required disclosures, and is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms.

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. There were no changes in our internal controls over financial reporting that occurred during the first quarter ended March 31, 2013 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1A. Risk Factors

A restated description of the risk factors associated with our business is set forth below. This description includes any material changes to and supersedes the descriptions of the risk factors associated with our business previously disclosed in Part I, Item 1A of our Annual Report on Form 10-K for our fiscal year ended December 31, 2012, or Annual Report. The following factors should be reviewed carefully, in conjunction with the other information contained in this Quarterly Report on Form 10-Q.

As previously discussed, our actual results could differ materially from our forward-looking statements. Our business faces a variety of risks. These risks include those described below and may include additional risks and uncertainties not presently known to us or that we currently deem immaterial. If any of the events or circumstances described in the following risk factors occur our business operations, performance and financial condition could be adversely affected and the trading price of our common stock could decline.

The current soft economic environment and continued uncertainty in the financial markets and other adverse changes in general conditions may exacerbate certain risks affecting our business.

The global financial crisis that began in 2008 caused disruption in the financial markets, including somewhat diminished liquidity and credit availability. We are unable to predict the strength and duration of an economic recovery. During 2012 and continuing to today research customers in our major markets have been concerned about levels of future government spending. In the U.S., researchers appear concerned about the effects of the sequestration on the federal government's future funding levels for life science research. While these conditions have not impaired our ability to access credit markets to date, there can be no assurance that these conditions will not adversely affect our ability to do so in the future, particularly if there is further deterioration in the world financial markets and major economies.

As our business has grown, we have become increasingly subject to the risks arising from adverse changes in domestic and global economic conditions. Continued concerns about credit markets, consumer confidence, economic conditions, government spending to sponsor life science research, volatile corporate profits and reduced capital spending could continue to negatively impact demand for our products. If economic growth in the U.S. and other countries continues to be slow and does not improve, customers may delay purchases of our products. The tightening of credit in financial markets may adversely affect the ability of our customers and suppliers to obtain financing, which could result in a decrease in, or deferrals or cancellations of, the sale of our products. If global economic and market conditions, or economic conditions in the United States, remain uncertain or persist, spread, or deteriorate further, we may experience a material adverse effect on our business, operating results and financial condition. Unstable economic, political and social conditions make it difficult for our customers, our suppliers and us to accurately forecast and plan future business activities. If such conditions persist, our business, financial condition and results of operations could suffer. We cannot project the extent of the impact of the economic environment on our industry or us.

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. A potential decrease in the level of governmental spending allocated to scientific and medical research 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. Spending by some of these customers fluctuates based on budget allocations and the timely passage of the annual federal budget. An impasse in federal government budget decisions could lead to substantial delays or reductions in federal spending. The U.S. Government has been unable to reach agreement on budget reduction measures required by the Budget Control Act of 2011. As a result, on March 1, 2013, an enforcement mechanism known as sequestration went into effect, which will trigger spending reductions over the next decade. Unless Congress and the Administration take further action, government funding would be reduced for certain of our customers, including those who are dependent on funding from the National Institutes of Health, which would likely have a significant effect on these entities' spending policies. These policies in turn can have a significant effect on the demand for our products.

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

Our revenues will likely be affected by various factors, including the seasonal nature of purchasing in Europe. Our revenues may vary from quarter to quarter due to a number of factors, including the timing of catalog mailings and new product introductions,

the release of grant and budget funding, future acquisitions and our substantial sales to European customers, who in summer months often defer purchases. In particular, delays or reduction in purchase orders from the pharmaceutical and biotechnology industries could have a material adverse effect on us and could adversely affect our stock price.

Attractive acquisition opportunities may not be available to us in the future.

We will consider the acquisition of other businesses. However, we may not have the opportunity to make suitable acquisitions on favorable terms in the future, which could negatively impact the growth of our business. In order to pursue such opportunities, we may require significant additional financing, which may not be available to us on favorable terms, if at all. We expect that our competitors, many of which have significantly greater resources than we do, will compete with us to acquire compatible businesses. This competition could increase prices for acquisitions that we would likely pursue.

The failure of any banking institution in which we deposit our funds or the failure of such banking institution to provide services in the current economic environment could have a material adverse effect on our results of operations, financial condition or access to borrowings.

We deposit our cash and cash equivalents with a number of financial institutions around the world. Should some or all of these financial institutions fail or otherwise be unable to timely perform requested services, we would likely have a limited ability to quickly access our cash deposited with such institutions. If we are unable to quickly access such funds, we may need to increase our use of our existing credit lines or access more expensive credit, if available. If we are unable to access some or all of our cash on deposit, either temporarily or permanently, or if we access existing or additional credit or are unable to access additional credit, it could have a negative impact on our operations, including our reported net income, our financial position, or both.

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. We may also incur significant expenditures in anticipation of an acquisition that is never realized.

We may not realize the expected benefits from acquisitions due to difficulties integrating the businesses, operations and product lines.

Our ability to achieve the benefits of acquisitions depends 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.

We completed the acquisition of CMA Microdialysis in July 2011 and AHN in February 2012. We may have difficulty successfully integrating these and other acquired businesses, and their domestic and foreign operations or product lines, and as a result, we may not realize any of the anticipated benefits of these and other acquisitions. We cannot assure that our growth rate will equal the growth rates that have been experienced by us and these and other acquired companies, respectively, operating as separate companies in the past.

We have been actively engaged in acquiring and divesting companies. As a result, we may be the subject of lawsuits from either an acquiring company's stockholders, an acquired company's previous stockholders, a divested company's stockholders or our current stockholders.

We may be the subject of lawsuits from either an acquiring company's stockholders, an acquired company's previous stockholders, a divested company's stockholders or our current stockholders. Such lawsuits could result from the actions of the acquisition or divestiture target prior to the date of the acquisition or divestiture, from the acquisition or divestiture transaction itself or from actions after the acquisition or divestiture. 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.

If our goodwill or intangible assets become impaired, we may be required to record a significant charge to earnings.

Under accounting principles generally accepted in the United States ("US GAAP"), we review our goodwill and intangible assets for impairment when events or changes in circumstances indicate the carrying value may not be recoverable. Goodwill is required to be tested for impairment at least annually. Factors that may be considered a change in circumstances indicating that the carrying value of our goodwill or other intangible assets may not be recoverable include a decline in our stock price and market capitalization, future cash flows, and slower growth rates in our industry. We may be required to record a significant charge to earnings in our financial statements during the period in which any impairment of our goodwill or other intangible assets is determined, which could adversely affect our results of operations.

Accounting for goodwill and other intangible assets may have a material adverse effect on us.

We assess the recoverability of identifiable intangibles with finite lives and other long-lived assets, such as property, plant and equipment, for impairment whenever events or changes in circumstances indicate that the carrying value may not be recoverable in accordance with the provisions of Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASU") 360, "*Property, Plant and Equipment*". In accordance with FASB ASU 350, "*Intangibles-Goodwill and Other*", 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 FASB ASU 360 and FASB ASU 350, which could have an adverse effect on net income for the period in which the write-off occurs. At March 31, 2013, our continuing operations had goodwill and intangible assets of $57.2 million, or 42%, of our total assets and we concluded that none of our goodwill or other intangible assets was impaired.

Future changes in financial accounting standards may adversely affect our reported results of operations.

We prepare our consolidated financial statements in accordance with US GAAP. These principles are subject to interpretation by the SEC and various bodies formed to interpret and create appropriate accounting principles. New accounting pronouncements and varying interpretations of accounting pronouncements have occurred and may occur in the future. A change in these principles can have a significant effect on our reported results and may even retroactively affect previously reported transactions. These new accounting pronouncements may adversely affect our reported financial results.

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

Management judgment and estimates are required in the application of our Critical Accounting Policies. We discuss these estimates in the subsection entitled critical accounting policies beginning on page 43 in Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations in the Annual Report. 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 41.0% of total revenues for 2012. We anticipate that revenue from international operations will continue to represent a substantial portion of our revenues in the foreseeable future. In addition, a number of our manufacturing facilities and suppliers are located outside the United States. The recent global economic slowdown has and could continue to have a negative effect on various foreign markets in which we operate. Accordingly, our future results could be harmed by a variety of factors, including:

- the impact of recessions and other economic conditions in economies, including Europe in particular, outside the United States,
- disruptions of capital and trading markets,
- in-ability to collect accounts receivable,
- limitations on repatriations of funds,
- potentially negative consequences from changes in tax laws affecting the ability to or cost of repatriating profits,
- difficulty in staffing and managing widespread operations, unfavorable labor regulations applicable to European operations, such as severance and the unenforceability of non-competition agreements in the European Union,
- other factors beyond our control, including terrorism, political unrest, acts of war, natural disasters and diseases,
- unexpected changes in regulatory requirements, and
- interruption to transportation flows for delivery of parts to us and finished goods to our customers.

Currency exchange rate fluctuations may have a negative impact on our reported earnings.

We are also subject to the risks of fluctuating foreign exchange rates, which could have a materially adverse effect on the sales price of our products in foreign markets, as well as the costs and expenses of our foreign subsidiaries. Approximately 38.0% of our business during 2012 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 translation and transaction gains and losses. Generally, we have not used forward exchange contracts to hedge our foreign currency exposures. 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 hedging methods, including foreign currency contracts. We recognize foreign currency gains or losses arising from our operations in the period incurred. We cannot guarantee that we will be successful in managing foreign currency risk or in predicting the effects of exchange rate fluctuations upon our future operating results because of the number of currencies involved, the variability of currency exposure and the potential volatility of currency exchange rates.

If we are not able to manage our growth, our operating profits or losses may be adversely impacted.

Our success will depend on the expansion of our operations through both organic growth and acquisitions. Effective growth management will place increased demands on our management team, 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.

We may incur additional restructuring costs or not realize the expected benefits of our initiatives to reduce operating expenses.

During the quarter ended September 30, 2010, we developed a plan to streamline our operations at Panlab s.l., our Harvard Apparatus business in Spain. The plan included workforce reduction in all functions of the organization and was carried out during that quarter.

During the quarter ended December 31, 2010, we developed a plan to reduce operating expenses at our Biochrom U.K. subsidiary. The plan included workforce reduction in all functions of the organization, inventory impairment charges and other charges and was carried out during that quarter.

During the quarter ended September 30, 2011, we initiated a plan to relocate our Hoefer subsidiary's San Francisco, California facility as part of a business improvement initiative. We also developed a plan to improve operating margins at our Coulbourn Instruments subsidiary.

During 2012, we initiated a plan to reduce operating expenses at Panlab s.l., our Harvard Apparatus business in Spain. The plan included workforce reduction.

We have incurred approximately $1.4 million in restructuring charges relating to our 2012, 2011 and 2010 restructuring plans and we may incur additional restructuring costs and we may not be able to fully realize the expected benefits of these initiatives. See Note 9 to our consolidated financial statements – Restructuring and Other Exit Costs filed with the Annual Report.

Spending in our Regenerative Medicine Device business will continue to have an adverse affect on our reported results of operations.

As we continue to spend increased amounts to fund the development of our RMD business, such spending will reduce our net income from continuing operations as well as have an adverse impact on the adjusted earnings per share and results of operations.

We may be unable to complete the planned HART spin-off and there are a number of risks associated with the spin-off that may have a material and adverse impact on our business, financial condition, results of operations, and cash flows.

On May 1, 2013, we announced that we will continue to move forward with respect to the HART spin-off to separate our regenerative medicine device business from our profitable core life science research tools business. There can be no assurance that the HART spin-off will be completed in the manner or timeframe as contemplated, or at all. There are a number of risks associated with the HART spin-off, including, without limitation, the following:

- Management estimates that the costs to complete the spin-off will be significant. In the event that the spin-off is not consummated, we will have incurred significant costs that we will not be able to recover, and for which we will not have received any benefit;
- The spin-off will require significant time and attention of our management and operational resources, and they may detract from the operation of our businesses and the execution of other strategic initiatives;
- Each of the independent publicly-traded companies resulting from the completion of the spin-off may be unable to achieve some or all of the full strategic and financial benefits that we expect will result from the separation of our Company into independent publicly-traded companies, or such benefits may be delayed or may not occur at all; and
- If the spin-off is consummated, each of the newly separated, publicly-traded companies will be smaller and less diversified, as compared to our Company today.

Any of the foregoing, in addition to any other risks related to the contemplated transactions that are not specifically described above, could materially and adversely affect our business, financial condition, results of operations, and cash flows.

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

Our success is highly dependent on the continued services of key management, technical and scientific personnel. Our management and other employees may voluntarily terminate their employment at any time upon short notice. The loss of the services of any member of the senior management team, including the Chief Executive Officer, Chane Graziano, the President, David Green, the Chief Operating Officer, Susan Luscinski, the Chief Financial Officer, Thomas McNaughton, or any of the managerial, technical or scientific staff may significantly delay or prevent the achievement of product development and other business objectives. Our future success will also depend on our ability to identify, recruit and retain additional qualified scientific, technical and managerial personnel. We operate in several geographic locations where labor markets are particularly competitive, including Boston, Massachusetts, the New York metropolitan area, London and Cambridge, England, 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.

We may be unsuccessful in developing new products for existing markets.

Our strategy includes developing new products to drive organic growth in our businesses. We may be unsuccessful developing new products that will be well received in existing markets. The products we develop may have less market demand than we anticipate or the demand may be at substantially lower prices than we anticipate. Our competitors may develop new products or technologies that diminish demand for our new products. Our customers may receive decreased funding levels, which may cause their demand for our products to decrease. Our efforts to develop new intellectual property and new products may be costly. Failure in our new product development program could have a material impact on our results of operation and our financial condition.

We may be unsuccessful in launching new products or expanding product offerings in the field of regenerative medicine.

We announced the launch of our "InBreath" bioreactor, which was our first product in the field of regenerative medicine. Since that time, we have developed additional bioreactor products and we intend to expand our portfolio of bioreactors in the field of regenerative medicine. We have also developed synthetic scaffold products for regenerative medicine. Scaffolds are artificial structures capable of supporting three-dimensional tissue formation. In regenerative medicine cells are implanted or "seeded" into scaffold. Scaffolds usually serve at least one of the following purposes: allow cell attachment and migration, deliver and retain cells and biochemical factors, enable diffusion of vital cell nutrients and expressed products, and exert certain mechanical and biological influences to modify the behaviour of the cell phase. In addition to developing bioreactors and synthetic scaffolds, we are also developing a stem cell therapy injector based on our market leading Harvard Apparatus research syringe pump technology. We intend to develop a series of products to address what we believe is a long-term growth opportunity in the field of regenerative medicine.

Although we believe the field of regenerative medicine presents long-term opportunities for us, we may be unsuccessful in identifying and pursuing such opportunities. We will be required to obtain regulatory approvals, including FDA and EU approvals, for our products in the field of regenerative medicine and there is no assurance that we will be able to successfully obtain such approvals on a timely basis or at all. In addition, obtaining regulatory approvals may require us to complete clinical trials necessary to support the approvals for our products and such trials will be expensive and can take a significant amount of time. Even if our clinical trials are completed as planned, we cannot be certain that their results will support our product claims or that the FDA, foreign competent authorities or notified bodies will agree with our conclusions regarding them. Even if our products in the field of regenerative medicine are cleared or approved by regulatory authorities, if we or our suppliers fail to comply with ongoing FDA or other foreign regulatory authority requirements, or if we experience unanticipated problems with our products, these products could be subject to restrictions or withdrawal from the market.

We may be unsuccessful in introducing new products in the field of regenerative medicine, expanding current product offerings and commercializing existing or new technologies. In addition, there may be a lack of demand in the present or in the future for the products that we introduce in the field of regenerative medicine.

The current size and the anticipated size of the regenerative medicine market may be smaller than what we currently believe. In addition, the existence and size of the opportunities that we believe currently are, or may in the future be, available to us may not exist or develop. We may experience competition from many competitors, some of whom may have greater resources or better products or technologies than we do. Our customers may experience decreased demand for our products and research funding levels from endowments at our university customers may decrease. Finally, we will need to acquire, develop and protect our intellectual property, which may involve significant costs, and operate without infringing on the intellectual property of others. Any failure in our pursuit of opportunities in the field of regenerative medicine could have a material impact on our financial condition and results of operations.

If our collaborators in the field of regenerative medicine do not devote sufficient time and resources to successfully carry out their duties or meet expected deadlines, we may not be able to advance our products in the field of regenerative medicine in a timely manner or at all.

We are currently collaborating in the field of regenerative medicine with multiple academic researchers and clinicians at a variety of research and clinical institutions. Our success in the field of regenerative medicine depends in part on the performance of our collaborators. Some collaborators may not be successful in their research and clinical trials or may not perform their obligations in a timely fashion or in a manner satisfactory to us. Typically, we cannot control the amount of resources or time our collaborators may devote to our programs or potential products that may be developed in collaboration with us. Our collaborators frequently depend on outside sources of funding to conduct or complete research and development, such as grants or other awards. In addition, our academic collaborators may depend on graduate students, medical students, or research assistants to conduct certain work, and such individuals may not be fully trained or experienced in certain areas, or they may elect to discontinue their participation in a particular research program, creating an inability to complete ongoing research in a timely and efficient manner. As a result of these uncertainties, we are unable to control the precise timing and execution of any experiments that may be conducted.

We do not have formal agreements in place with most of our collaborators in the field of regenerative medicine, who retain the ability to pursue other research, product development or commercial opportunities that may be directly competitive with our programs. If these collaborators elect to prioritize or pursue other programs in lieu of ours, we may not be able to advance product development programs in an efficient or effective manner, if at all. If a collaborator is pursuing a competitive program and encounters unexpected financial or capability limitations, they may be motivated to reduce the priority placed on our programs or delay certain activities related to our programs. Any of these developments could harm or slow our product and technology development efforts.

In particular, in the field of regenerative medicine we depend upon Dr. Paolo Macchiarini, the surgeon who has led all of the clinical surgeries to date using our technology. Dr. Macchiarini's team developed the initial version of our InBreath airway bioreactor, which we have licensed from the inventors. We continue to collaborate with Dr. Macchiarini on grant proposals and product development. If Dr. Macchiarini were not available to continue to collaborate with us or perform surgeries it would materially slow development of our products. On September 27, 2012, Dr. Macchiarini was arrested in Italy for attempted fraud and extortion for allegedly attempting to persuade severely ill patients to choose private hospitals in other countries over less expensive Italian public hospitals. He was temporarily placed under house arrest and on October 15, 2012 was released from house arrest and is free to travel internationally and to perform surgeries. The case is ongoing. Dr. Macchiarini believes these charges are without merit and has, and intends to continue to, vigorously defend these charges. These allegations do not relate to any surgeries involving our products and have not prevented Dr. Macchiarini from making preparations for further transplant surgeries using our products at the Karolinska Hospital, or in the U.S. or Russia. If Dr. Macchiarini decides to terminate his collaboration with us, if the case described above consumes a significant amount of his time, or if the case prevents him from performing surgeries, our product development efforts could be adversely affected and it could cause harm to our reputation or business.

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,
- companies developing life science or drug discovery technologies, and
- companies developing regenerative medicine 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 technological change, and therefore one or more of our products could be made obsolete by new technologies.

Because the market for life science tools is characterized by 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 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 change as new technologies are developed and introduced in the marketplace. We may have difficulty in keeping abreast of the 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.

***Rising commodity and precious metals costs could adversely impact our profitability*.**

Raw material commodities such as resins, and precious metal commodities such as platinum are subject to wide price variations. Increases in the costs and availability of these commodities and the costs of energy, transportation and other necessary services may adversely affect our profit margins if we are unable to pass along any higher costs in the form of price increases or otherwise achieve cost efficiencies such as in manufacturing and distribution.

Our Credit Agreement contains certain financial and negative covenants, the breach of which may adversely affect our financial condition.

On March 29, 2013, we entered into a Second Amended and Restated Revolving Credit Agreement with Bank of America, as agent, and Bank of America and Brown Brothers Harriman & Co as lenders. As March 31, 2013 and December 31, 2012, we had borrowings of $15.0 million and $13.0 million, respectively, under the Credit Agreement. The Credit Agreement includes covenants relating to income, debt coverage and cash flow and minimum working capital requirements. The Credit Agreement also contains limitations on our ability to incur additional indebtedness and requires lender approval for acquisitions funded with cash, promissory notes and/or other consideration in excess of $6.0 million and for acquisitions funded solely with equity in excess of $10.0 million. 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 Credit Agreement may become immediately due and payable. This immediate payment may negatively impact our financial condition.

Failure to raise additional capital or generate the significant capital necessary to implement our acquisition strategy, finance the development of our Regenerative Medicine Device business, expand our operations and invest in new products could reduce our ability to compete and result in less 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 sufficient capital on favorable terms and on a timely basis (if at all) could seriously harm our business, product development, development of our RMD business 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. In addition, our revolving credit loan agreement with Bank of America, as agent, and Bank of America and Brown Brothers Harriman & Co as lenders, contains limitations on our ability to incur additional indebtedness and requires lender approval for acquisitions funded with cash, promissory notes and/or other consideration in excess of $6.0 million and for acquisitions funded solely with equity in excess of $10.0 million. If future financing is not available or is not available on acceptable terms, we may have to alter our operations or change our business strategy. We cannot assure you that the capital required to fund operations or our acquisition strategy will be available in the future.

If GE Healthcare (formerly Amersham Biosciences) terminates its distribution agreements with us, fails to renew such agreements on favorable terms 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.

We have distribution agreements with GE Healthcare in two of our businesses. In April 2008, our Biochrom subsidiary entered into a new distribution agreement with GE Healthcare that expires December 31, 2013 if it is not extended by GE Healthcare for an additional one-year period. In November 2003, in connection with the acquisition of Hoefer from GE Healthcare, we entered into a separate distribution agreement with GE Healthcare for the distribution of the Hoefer products. This contract expires in September 30, 2013. We believe our relationship with GE Healthcare is good. However, 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. If any of these events occurs, our marketing and distribution efforts for some of our products may be impaired and our revenues may be adversely impacted.

For 2012, approximately 6% of our revenues were generated through our two distribution agreements with GE Healthcare.

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. In addition, following any termination of such agreements, our inability to enter into new agreements with GE Healthcare for product distribution could materially impede the growth of our business and our ability to generate sufficient revenue.

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 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 be accepted and patents might not be issued, and any patent previously issued to us may be challenged, invalidated, held unenforceable or circumvented. Furthermore, the claims in patents which have been issued or which may be issued to us in the future may not be sufficiently broad to prevent third parties from producing competing products similar to our products. In addition, the laws of various foreign countries in which we compete may not protect our intellectual property to the same extent, as do the laws of the United States. If we fail to obtain adequate patent protection for our proprietary technology, our ability to be commercially competitive could 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 be able to obtain these agreements in all circumstances in part due to local regulations. 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.

The manufacture, sale and use of products and services may expose us to product liability claims for which we could have substantial liability.

We face an inherent business risk of exposure to product liability claims if our products, services or product candidates, including without limitation, any of our life science research tools or our "InBreath" bioreactors , syringe pumps or synthetic scaffolds utilized now or in the future in relation to our Regenerative Medical Device division, are alleged or found to have caused injury, damage or loss. Such losses could include claims for liabilities relating to patients that suffer serious complications or death during or following transplants involving our Regenerative Medical Device division products. We may in the future be unable to obtain insurance with adequate levels of coverage for potential liability on acceptable terms or claims of this nature may be excluded from coverage under the terms of any insurance policy that we can obtain. If we are unable to obtain such insurance or the amounts of any claims successfully brought against us substantially exceed our coverage, then our business could be adversely impacted.

If we fail to maintain satisfactory compliance with the regulations of the United States Food and Drug Administration and other governmental agencies, we may be forced to recall products and cease their manufacture and distribution, and we could be subject to civil or criminal penalties.

Our operations are subject to regulation by different state and federal government agencies in the United States and other countries. If we fail to comply with those regulations, we could be subject to fines, penalties, criminal prosecution or other sanctions. Some of the products we produce are subject to regulation by the United States Food and Drug Administration and similar foreign and domestic agencies. These regulations govern a wide variety of product activities, from design and development to labeling, manufacturing, promotion, sales, resales and distribution. If we fail to comply with those regulations or those of similar foreign and domestic agencies, we may have to recall products, cease their manufacture and distribution, and may be subject to fines or criminal prosecution.

Our 2002 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, has not provided a ruling on the matter, Genomic Solutions obtained a legal opinion from its tax counsel that the merger constitutes a non-taxable 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 non-taxable 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. If we were to be liable for any such tax, it could have a material adverse effect on our financial condition.

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 should they occur. 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 being rejected and no patents being issued.

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. We have received correspondence from legal counsel to Nanofiber Solutions, Inc., or NFS, claiming that in developing our scaffold product and related intellectual property, we may have committed misappropriation, unauthorized use and disclosure of confidential information, and possible infringement of intellectual property rights of NFS. 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.

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, the biotechnology industry is largely dependent on raising capital to fund its operations. If biotechnology companies that are our customers 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 or biotechnology companies that are our customers 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. A decrease in the level of governmental spending, such as the anticipated effects from sequestration on U.S. government spending, allocated to scientific and medical research could substantially reduce or even eliminate these grants, and could also have an adverse impact on our results of operations. If government funding necessary to purchase our products were to decrease, our business and results of operations could be materially adversely affected.

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

We and the customers of any company we acquire may, in response to the consummation of the acquisition, 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 post-acquisition strategies. This may adversely affect our ability to attract and retain key management, sales, marketing and technical personnel following an acquisition.

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.

Some of our products may be used in areas of research and clinical usage involving cloning, cell-based technologies, including stem cells, human tissue and organ transplants, animal research and other techniques presently being explored in the life science or regenerative medicine industries. These techniques have drawn much negative attention recently in the public forum. Government authorities may regulate or prohibit any of these activities. Additionally, the public may disfavor or reject these activities.

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 tasks that are more productive.

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:

- volatility of the financial markets,
- uncertainty regarding the prospects of the domestic and foreign economies,
- failure to consummate the spin-off of HART,
- failure to achieve our desired tax treatment of the proposed separation and spin-off of HART,
- 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,
- developments relating to the proposed distribution or other action or market speculation regarding the proposed distribution or other transaction,

- 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 becoming subject to lawsuits 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, public stock markets have experienced extreme price and trading volatility. The stock market and the NASDAQ Global 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 further 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, of our charter and bylaws and our Shareholder Rights Plan 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. In February 2008, our Board of Directors adopted a Shareholder Rights Plan that could make it more difficult for a third party to acquire, or could discourage a third party from acquiring, the Company or a large block of our common stock. A third party that acquires 20% or more of our common stock (an "Acquiring Person") could suffer substantial dilution of its ownership interest under the terms of the Shareholder Rights Plan through the issuance of common stock to all shareholders other than the Acquiring Person. 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 Global Market, an active trading market for the shares may not be sustained. This could negatively affect the price for our common stock, including investors' ability to buy or sell our common stock and the listing thereof.

Any issuance of preferred stock in the future 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 likely 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 to holders of our common stock 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.

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Item 6. Exhibits

Exhibit Index	
31.1+	Certification of Chief Financial Officer of Harvard Bioscience, Inc., pursuant to Rules 13a-14(a) and 15d-14(a), 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-14(a) and 15d-14(a), 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.
101.INS**	XBRL Instance Document
101.SCH**	XBRL Taxonomy Extension Schema Document
101.CAL**	XBRL Taxonomy Extension Calculation Linkbase Document
101.LAB**	XBRL Taxonomy Extension Labels Linkbase Document
101.PRE**	XBRL Taxonomy Extension Presentation Linkbase Document
101.DEF**	XBRL Taxonomy Extension Definition Linkbase Document

\+ Filed herewith.

* 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.

** XBRL (Extensive Business Reporting Language) information is furnished and not filed or a part of a registration statement or prospectus for purposes of sections 11 or 12 of the Securities Act of 1933, is deemed not filed for purposes of Section 18 of the Securities Exchange Act of 1934, and otherwise is not subject to liability under these sections.

SIGNATURES

Pursuant to the requirements 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.

Date: May 10, 2013

HARVARD BIOSCIENCE, INC.

By: /S/ CHANE GRAZIANO
Chane Graziano
Chief Executive Officer

By: /S/ THOMAS MCNAUGHTON
Thomas McNaughton
Chief Financial Officer

Exhibit 31.1

Certification

I, Thomas McNaughton, 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 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: May 10, 2013

/s/ Thomas McNaughton

Thomas McNaughton
Chief Financial Officer

Exhibit 31.2

Certification

I, Chane Graziano, certify that:

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

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

3. Based on my knowledge, the 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: May 10, 2013

/s/ Chane Graziano

Chane Graziano
Chief Executive Officer

Exhibit 32.1

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

The undersigned officer of Harvard Bioscience, Inc. (the "Company") hereby certifies to his knowledge that the Company's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2013 (the "Report") to which this certification is being furnished as an exhibit, 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: May 10, 2013

/s/ Thomas McNaughton
Name: Thomas McNaughton
Title: Chief Financial Officer

Exhibit 32.2

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

The undersigned officer of Harvard Bioscience, Inc. (the "Company") hereby certifies to his knowledge that the Company's Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2013 (the "Report") to which this certification is being furnished as an exhibit, 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: May 10, 2013

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