

**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, 2014

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
(State or Other Jurisdiction of
Incorporation or Organization)

04-3306140
(IRS Employer
Identification No.)

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

01746
(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	<input type="checkbox"/>	Accelerated filer	<input checked="" type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/> (Do not check if a smaller reporting company)	Smaller reporting company	<input type="checkbox"/>

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, 2014, there were 31,957,070 shares of common stock, par value \$0.01 per share, outstanding.

HARVARD BIOSCIENCE, INC.
FORM 10-Q
For the Quarter Ended March 31, 2014

INDEX

	Page
<u>PART I - FINANCIAL INFORMATION</u>	<u>1</u>
<u>Item 1. Financial Statements</u>	<u>1</u>
<u>Consolidated Balance Sheets as of March 31, 2014 and December 31, 2013 (unaudited)</u>	<u>1</u>
<u>Consolidated Statements of Income and Comprehensive Income (Loss) for the Three Months Ended March 31, 2014 and 2013 (unaudited)</u>	<u>2</u>
<u>Consolidated Statements of Cash Flows for the Three Months Ended March 31, 2014 and 2013 (unaudited)</u>	<u>3</u>
<u>Notes to Unaudited Consolidated Financial Statements</u>	<u>4</u>
<u>Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations</u>	<u>16</u>
<u>Item 3. Quantitative and Qualitative Disclosures about Market Risk</u>	<u>23</u>
<u>Item 4. Controls and Procedures</u>	<u>24</u>
<u>PART II - OTHER INFORMATION</u>	<u>24</u>
<u>Item 1A. Risk Factors</u>	<u>24</u>
<u>Item 6. Exhibits</u>	<u>25</u>
<u>SIGNATURES</u>	<u>26</u>

PART I. FINANCIAL INFORMATION

Item 1. Financial Statements.

HARVARD BIOSCIENCE, INC.
CONSOLIDATED BALANCE SHEETS
(Unaudited, in thousands, except share and per share data)

	March 31, 2014	December 31, 2013
Assets		
Current assets:		
Cash and cash equivalents	\$ 25,837	\$ 25,771
Accounts receivable, net of allowance for doubtful accounts of \$386 and \$358, respectively	14,319	13,884
Inventories	15,772	15,777
Deferred income tax assets - current	1,546	1,547
Other receivables and other assets	3,771	3,771
Total current assets	61,245	60,750
Property, plant and equipment, net	4,329	4,375
Deferred income tax assets - non-current	13,086	13,116
Amortizable intangible assets, net	18,370	19,009
Goodwill	36,682	36,605
Other indefinite lived intangible assets	1,289	1,289
Other assets	292	316
Total assets	<u>\$ 135,293</u>	<u>\$ 135,460</u>
Liabilities and Stockholders' Equity		
Current liabilities:		
Current portion, long-term debt	\$ 5,000	\$ 5,000
Accounts payable	4,667	4,682
Deferred revenue	613	640
Accrued income taxes	117	99
Accrued expenses	4,688	5,078
Other liabilities - current	394	586
Total current liabilities	15,479	16,085
Long-term debt, less current installments	18,500	19,750
Deferred income tax liabilities - non-current	155	160
Other long term liabilities	4,975	4,980
Total liabilities	39,109	40,975
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; 39,694,337 and 39,384,974 shares issued and 31,948,830 and 31,639,467 shares outstanding, respectively	392	390
Additional paid-in-capital	203,198	202,446
Accumulated deficit	(94,320)	(95,039)
Accumulated other comprehensive loss	(2,418)	(2,644)
Treasury stock at cost, 7,745,507 common shares	(10,668)	(10,668)
Total stockholders' equity	96,184	94,485
Total liabilities and stockholders' equity	<u>\$ 135,293</u>	<u>\$ 135,460</u>

See accompanying notes to unaudited consolidated financial statements.

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

	Three Months Ended	
	March 31,	
	2014	2013
Revenues	\$ 25,893	\$ 26,086
Cost of product revenues (exclusive of items shown separately below)	14,132	13,826
Gross profit	<u>11,761</u>	<u>12,260</u>
Sales and marketing expenses	4,432	4,539
General and administrative expenses	4,251	4,222
Research and development expenses	973	1,013
Restructuring charges (credits)	137	(21)
Amortization of intangible assets	634	679
HART transaction costs	-	503
Total operating expenses	<u>10,427</u>	<u>10,935</u>
Operating income	<u>1,334</u>	<u>1,325</u>
Other (expense) income:		
Foreign exchange	(81)	34
Interest expense	(265)	(130)
Interest income	14	9
Other income (expense), net	17	(8)
Other expense, net	<u>(315)</u>	<u>(95)</u>
Income from continuing operations before income taxes	1,019	1,230
Income tax expense	300	299
Income from continuing operations	719	931
Discontinued operations:		
Loss from discontinued operations, net of tax	-	(835)
Net income	<u>\$ 719</u>	<u>\$ 96</u>
Earnings (loss) per share:		
Basic earnings per common share from continuing operations	\$ 0.02	\$ 0.03
Discontinued operations	-	(0.03)
Basic earnings per common share	<u>\$ 0.02</u>	<u>\$ 0.00</u>
Diluted earnings per common share from continuing operations	\$ 0.02	\$ 0.03
Discontinued operations	-	(0.03)
Diluted earnings per common share	<u>\$ 0.02</u>	<u>\$ 0.00</u>
Weighted average common shares:		
Basic	<u>31,847</u>	<u>29,778</u>
Diluted	<u>32,925</u>	<u>31,665</u>
Comprehensive income (loss):		
Net income	\$ 719	\$ 96
Foreign currency translation adjustments	215	(2,037)
Derivatives qualifying as hedges, net of tax:		
Loss on derivative instruments designated and qualifying as cash flow hedges	(24)	-
Amounts reclassified from accumulated other comprehensive loss to net income	35	-
Total comprehensive income (loss)	<u>\$ 945</u>	<u>\$ (1,941)</u>

See accompanying notes to unaudited consolidated financial statements.

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

	Three Months Ended	
	March 31,	
	2014	2013
Cash flows from operating activities:		
Net income	\$ 719	\$ 96
Adjustments to reconcile net income to net cash provided by operating activities:		
Stock compensation expense	447	649
Depreciation	300	357
Earn-out related to discontinued operations	-	(200)
(Gain) loss on sales of fixed assets	(76)	1
Non-cash restructuring credit	(102)	(21)
Amortization of catalog costs	13	32
Provision for allowance for doubtful accounts	27	31
Amortization of intangible assets	634	679
Amortization of deferred financing costs	15	-
Deferred income taxes	35	(431)
Changes in operating assets and liabilities:		
Increase in accounts receivable	(437)	(103)
Decrease (increase) in inventories	48	(433)
Decrease (increase) in other receivables and other assets	5	(257)
Decrease in trade accounts payable	(24)	(153)
Increase (decrease) in accrued income taxes	25	(294)
(Decrease) increase in accrued expenses	(489)	639
(Decrease) increase in deferred revenue	(29)	115
Decrease in other liabilities	(39)	(131)
Net cash provided by operating activities	<u>1,072</u>	<u>576</u>
Cash flows (used in) provided by investing activities:		
Additions to property, plant and equipment	(282)	(354)
Proceeds from sales of property, plant and equipment	113	-
Net cash used in investing activities	<u>(169)</u>	<u>(354)</u>
Cash flows (used in) provided by financing activities:		
Proceeds from issuance of debt	-	2,049
Repayments of debt	(1,250)	-
Net proceeds from issuance of common stock	319	1,553
Net cash (used in) provided by financing activities	<u>(931)</u>	<u>3,602</u>
Effect of exchange rate changes on cash	94	(756)
Increase in cash and cash equivalents	66	3,068
Cash and cash equivalents at the beginning of period	25,771	20,681
Cash and cash equivalents at the end of period	<u>\$ 25,837</u>	<u>\$ 23,749</u>
Supplemental disclosures of cash flow information:		
Cash paid for interest	\$ 268	\$ 68
Cash paid for income taxes, net of refunds	\$ 433	\$ 606

See accompanying notes to unaudited consolidated financial statements.

HARVARD BIOSCIENCE, INC.
Notes to Unaudited Consolidated Financial Statements

1. Basis of Presentation and Summary of Significant Accounting Policies

Basis of Presentation

The unaudited consolidated financial statements of Harvard Bioscience, Inc. and its wholly-owned subsidiaries (collectively, “Harvard Bioscience” or the “Company”) as of March 31, 2014 and for the three months ended March 31, 2014 and 2013 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, 2013 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, 2013, which was filed with the SEC on March 14, 2014.

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, 2014, results of operations and comprehensive income (loss) for the three months ended March 31, 2014 and 2013 and cash flows for the three months ended March 31, 2014 and 2013, as applicable, have been made. The results of operations for the three months ended March 31, 2014 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, 2013, which was filed with the SEC on March 14, 2014.

2. Recently Issued Accounting Pronouncements

In April 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2014-08, “*Reporting Discontinued Operations and Disclosures of Disposals of Components of an Entity*”, which changes the criteria for reporting discontinued operations and enhances convergence of the FASB’s and the International Accounting Standard Board’s (IASB) reporting requirements for discontinued operations. The ASU is effective prospectively for fiscal years, and interim periods within those years, beginning after December 15, 2014. The Company believes the adoption of this guidance will not have a material impact on its consolidated financial position, results of operations or cash flows due to the prospective application of the guidance. Future disposals, if any, will be assessed based on this new guidance, which may have an impact on its consolidated financial position, results of operations or cash flows.

In July 2013, the FASB issued ASU 2013-11, “*Income Taxes (Topic 740): Presentation of an Unrecognized Tax Benefit When a Net Operating Loss Carryforward, a Similar Tax Loss, or a Tax Credit Carryforward Exists*”, which requires an entity to present an unrecognized tax benefit as a reduction of a deferred tax asset for a net operating loss (NOL) carryforward, or similar tax loss or tax credit carryforward, rather than as a liability when the uncertain tax position would reduce the NOL or other carryforward under the tax law. The ASU is effective prospectively for fiscal years, and interim periods within those years, beginning after December 15, 2013. The adoption of this guidance did not have a material impact on the Company’s consolidated financial position, results of operations or cash flows.

3. Accumulated Other Comprehensive (Loss) Income

Changes in each component of accumulated other comprehensive (loss) income, net of tax are as follows:

(in thousands)	Foreign currency translation adjustments	Derivatives qualifying as hedges	Defined benefit pension plans	Total
Balance at December 31, 2013	\$ 1,283	\$ (49)	\$ (3,878)	\$ (2,644)
Other comprehensive income (loss) before reclassifications	215	(24)	-	191
Amounts reclassified from AOCI	-	35	-	35
Net other comprehensive income	215	11	-	226
Balance at March 31, 2014	<u>\$ 1,498</u>	<u>\$ (38)</u>	<u>\$ (3,878)</u>	<u>\$ (2,418)</u>

4. Goodwill and Other Intangible Assets

Intangible assets consist of the following:

	March 31, 2014		December 31, 2013		Weighted Average Life	(a)
	(in thousands)					
Amortizable intangible assets:	Gross	Accumulated Amortization	Gross	Accumulated Amortization		
Existing technology	\$ 13,504	\$ (11,287)	\$ 13,464	\$ (11,091)	4.1	Years
Trade names	6,175	(2,286)	6,178	(2,185)	10.7	Years
Distribution agreement/customer relationships	21,816	(9,813)	21,827	(9,447)	10.4	Years
Patents	274	(13)	271	(8)	4.9	Years
Total amortizable intangible assets	<u>41,769</u>	<u>\$ (23,399)</u>	<u>41,740</u>	<u>\$ (22,731)</u>		
Indefinite-lived intangible assets:						
Goodwill	36,682		36,605			
Other indefinite-lived intangible assets	1,289		1,289			
Total goodwill and other indefinite-lived intangible assets	<u>37,971</u>		<u>37,894</u>			
Total intangible assets	<u>\$ 79,740</u>		<u>\$ 79,634</u>			

(a) Weighted average life is as of March 31, 2014.

The change in the carrying amount of goodwill for the three months ended March 31, 2014 is as follows:

	(in thousands)
Balance at December 31, 2013	\$ 36,605
Effect of change in foreign currencies	77
Balance at March 31, 2014	<u>\$ 36,682</u>

Intangible asset amortization expense was \$0.6 million and \$0.7 million for the three months ended March 31, 2014 and 2013, respectively. Amortization expense of existing amortizable intangible assets is currently estimated to be \$2.5 million for the year ending December 31, 2014, \$2.2 million for the year ending December 31, 2015, \$2.1 million for the year ending December 31, 2016, \$1.8 million for the year ending December 31, 2017 and \$1.7 million for the year ending December 31, 2018.

5. Inventories

Inventories consist of the following:

	March 31, 2014	December 31, 2013
	(in thousands)	
Finished goods	\$ 6,845	\$ 7,039
Work in process	790	752
Raw materials	8,137	7,986
Total	<u>\$ 15,772</u>	<u>\$ 15,777</u>

6. Property, Plant and Equipment

Property, plant and equipment consist of the following:

	March 31, 2014	December 31, 2013
	(in thousands)	
Land, buildings and leasehold improvements	\$ 3,116	\$ 3,082
Machinery and equipment	9,569	9,471
Computer equipment and software	5,019	4,927
Furniture and fixtures	1,290	1,281
Automobiles	59	59
	<u>19,053</u>	<u>18,820</u>
Less: accumulated depreciation	(14,724)	(14,445)
Property, plant and equipment, net	<u>\$ 4,329</u>	<u>\$ 4,375</u>

7. Restructuring and Other Exit Costs**2013 Restructuring Plan**

During the fourth quarter of 2013, the management of Harvard Bioscience initiated a plan to realign global operations to create organizational efficiencies and reduce operating expenses throughout the Company. The plan included an approximately 13% reduction in the workforce, as well as the elimination of the position of Chief Operating Officer. During 2013, the Company recorded restructuring charges of approximately \$2.1 million representing severance payments. Additional charges related to this plan are expected to be incurred through the second quarter of 2014, and include, but not limited to, contract termination costs, as well as moving and employee relocation costs. For the three months ended March 31, 2014, the Company recorded net restructuring charges of approximately \$0.1 million representing severance and other payments. Payments related to this plan are expected to be made through the end of 2014. Activity and liability balances related to these charges were as follows:

	Severance and Related Costs	Other	Total
	(in thousands)		
Restructuring charges	\$ 2,100	\$ -	\$ 2,100
Cash payments	(666)	-	(666)
Restructuring balance at December 31, 2013	1,434	-	1,434
Restructuring charges	161	78	239
Non-cash reversal of restructuring charges	(99)	-	(99)
Cash payments	(777)	-	(777)
Restructuring balance at March 31, 2014	<u>\$ 719</u>	<u>\$ 78</u>	<u>\$ 797</u>

2012 Restructuring Plan

During 2012, the management of Harvard Bioscience initiated a plan to reduce operating expenses at one of its foreign subsidiaries. The Company recorded restructuring charges of approximately \$0.3 million representing severance payments. No further charges are expected to be incurred on this matter. 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	(84)	(11)	(95)
Non-cash reversal of restructuring charges	(46)	-	(46)
Restructuring balance at December 31, 2013	3	-	3
Non-cash reversal of restructuring charges	(3)	-	(3)
Restructuring balance at March 31, 2014	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>

Aggregate net restructuring charges relating to the 2013 Restructuring Plan and the 2012 Restructuring Plan were as follows:

	Three Months Ended March 31,	
	2014	2013
	(in thousands)	
Restructuring charges (credits)	<u>\$ 137</u>	<u>\$ (21)</u>

8. Discontinued Operations

Genomic Solutions

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 rate of LIBOR plus 1100 basis points per annum. Digilab had delivered promissory notes of \$4.6 million, for which no amounts have been collected to date. 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.

UBI

In September 2008, the Company completed the sale of assets of its Union Biometrica Division ("UBI") including its German subsidiary, Union Biometrica GmbH, representing 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 revenues generated by the acquired business as it was 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. During 2013, UBIO Acquisition Company made payments, including interest, of \$1.8 million. UBIO Acquisition Company's final payment under the earn-out obligation was received in October 2013.

HART

On November 1, 2013, the spin-off of Harvard Apparatus Regenerative Technology, Inc., or HART, from the Company was completed. Through the spin-off date, the historical operations of HART were reported as continuing operations in the consolidated statements of operations of the Company. Following the spin-off, the historical operations of HART have been reclassified and reported as discontinued operations for all periods presented. As a result of the spin-off and related separation, HART became an independent company that operates the regenerative medicine business previously owned by Harvard Bioscience. The spin-off was completed through the distribution to Harvard Bioscience's stockholders of record all of the shares of common stock of HART (the "Distribution"). In the Distribution, the Company distributed to its stockholders one share of HART common stock for every four shares of Harvard Bioscience common stock outstanding as of the close of business on October 21, 2013, the record date for the Distribution. Fractional shares of HART common stock were not included in the distribution. Instead, Registrar & Transfer Company aggregated fractional shares into whole shares, sold the whole shares in the open market and distributed the aggregate net cash proceeds of the sales pro rata to each holder who otherwise would have been entitled to receive a fractional share in the Distribution.

Effective with the spin-off, the Company contributed \$15.0 million in cash to HART to fund its operations. In addition, the Company transferred approximately \$0.9 million in assets, made up primarily of property, plant and equipment, to HART as part of the spin-off.

In connection with the spin-off of HART, certain required adjustments were made to the Company's outstanding equity compensation awards under its employee benefit plans. Each outstanding option to purchase Harvard Bioscience common stock was converted on the date of the Distribution into both an adjusted Harvard Bioscience option to purchase Harvard Bioscience common stock and an option to purchase HART common stock. Black-Scholes valuation modeling was used to determine the value that each Harvard Bioscience option had lost at the time of the Distribution and to ensure the holder maintained such lost value, 80% of such lost value was provided back to the holder by making appropriate adjustments to the share amount and exercise price of the existing Harvard Bioscience option and 20% of such lost value was provided back to the holder through the issuance of an option to purchase HART common stock. Similar to the adjustment of the existing Harvard Bioscience options, with respect to each unvested Harvard Bioscience restricted stock unit outstanding at the time of the Distribution, such Harvard Bioscience restricted stock unit was converted on the date of the Distribution into both an adjusted Harvard Bioscience restricted stock unit and a HART restricted stock unit. The market prices of Harvard Bioscience and HART common stock were used to determine the value that each Harvard Bioscience restricted stock unit lost at the time of the Distribution and then to ensure the holder maintained such lost value, 80% of such lost value was provided back to the holder by making the appropriate increases of the share amount of the existing Harvard Bioscience restricted stock unit and 20% of such lost value was provided back to the holder through the issuance of a HART restricted stock unit. The share amounts and exercise prices of the adjusted Harvard Bioscience options and HART options, as well as the share amounts of the adjusted Harvard Bioscience restricted stock units and HART restricted stock units, were each adjusted and set in a manner to ensure the intrinsic value held by the holder pertaining to the existing Harvard Bioscience award was maintained immediately following the Distribution and was determined such that tax was not triggered under Section 409A of the Internal Revenue Code. As part of these required adjustments, the Company issued approximately 1.7 million options and approximately 0.1 million restricted stock units to holders of its outstanding equity compensation awards.

In connection with the spin-off, on October 31, 2013, the Company entered into various commercial agreements with HART which contain many of the key terms, conditions and arrangements related to the Distribution. A description of certain of these agreements can be found in Note 9.

Harvard Bioscience intends for the Distribution and related separation, taken together, to qualify as a reorganization pursuant to which no gain or loss is recognized by Harvard Bioscience or its stockholders for federal income tax purposes under Sections 355, 368(a)(1)(D) and related provisions of the Internal Revenue Code. On June 28, 2013, Harvard Bioscience received a Supplemental Ruling to the Private Letter Ruling dated March 22, 2013 from the IRS to the effect that, among other things, the spin-off will qualify as a transaction that is tax-free for U.S. federal income tax purposes under Section 355 and 368(a)(1)(D) of the Internal Revenue Code continuing in effect. Harvard Bioscience has also received an opinion from its outside tax advisor to such effect. In connection with the ruling and the opinion, Harvard Bioscience made certain representations regarding it and its business. The Company has agreed that it will not take or fail to take any action which prevents or could reasonably be expected to prevent the tax-free status of the spin-off. HART has agreed to certain restrictions that are intended to preserve the tax-free status of the contribution and the Distribution. HART may take certain actions otherwise prohibited by these covenants if Harvard Bioscience receives a private letter ruling from the IRS or if HART obtains, and provides to Harvard Bioscience, an opinion from a U.S. tax counsel or accountant of recognized national standing, in either case, acceptable to Harvard Bioscience in its sole and absolute discretion to the effect that such action would not jeopardize the tax-free status of the contribution and the Distribution. These covenants include restrictions on HART's:

- issuance or sale of stock or other securities (including securities convertible into HART's stock but excluding certain compensatory arrangements);
- sales of assets outside the ordinary course of business; and

- entering into any other corporate transaction which would cause HART to undergo a 50% or greater change in HART's stock ownership.

In addition, current U.S. federal income tax law creates a presumption that the spin-off of HART would be taxable to the Company, but not its stockholders, if such spin-off is part of a "plan or series of related transactions" pursuant to which one or more persons acquire directly or indirectly stock representing a 50% or greater interest (by vote or value) in the Company or HART. Acquisitions that occur during the four-year period that begins two years before the date of the spin-off are presumed to occur pursuant to a plan or series of related transactions, unless it is established that the acquisition is not pursuant to a plan or series of transactions that includes the spin-off. U.S. Treasury regulations currently in effect generally provide that whether an acquisition and a spin-off are part of a plan is determined based on all of the facts and circumstances, including, but not limited to, specific factors described in the U.S. Treasury regulations. In addition, the U.S. Treasury regulations provide several "safe harbors" for acquisitions that are not considered to be part of a plan. These rules will limit the Company's ability during the two-year period following the spin-off to enter into certain transactions that may be advantageous to the Company and its stockholders, particularly issuing equity securities to satisfy financing needs, repurchasing equity securities, disposing of certain assets, engaging in mergers and acquisitions, and, under certain circumstances, acquiring businesses or assets with equity securities or agreeing to be acquired.

The following table sets forth the impact of discontinued operations on the Company's consolidated statements of income for the three months ended March 31, 2014 and 2013.

	Three Months Ended	
	March 31,	
	2014	2013
	(in thousands)	
Gain on disposal of discontinued operations, UBI	\$ -	\$ 200
(Loss) from discontinued operations, HART	-	(1,483)
Income tax (benefit)	-	(448)
(Loss) from discontinued operations, net of tax	\$ -	\$ (835)

9. Related Party Transactions

In connection with the HART spin-off, the Company entered into various commercial agreements with HART. These agreements include: (i) a Separation and Distribution Agreement to effect the separation and spin-off distribution and provide other agreements to govern the Company's relationship with HART after the spin-off; (ii) an Intellectual Property Matters Agreement, which governs various intellectual property related arrangements between the Company and HART, including the separation of intellectual property rights between the Company and HART, as well as certain related cross-licenses between the two companies; (iii) a Product Distribution Agreement, which provides that each company will become the exclusive distributor for the other party for products such other party develops for sale in the markets served by the other; (iv) a Tax Sharing Agreement, which governs the Company's and HART's respective rights, responsibilities and obligations with respect to tax liabilities and benefits, tax attributes, the preparation and filing of tax returns, the control of audits and other tax proceedings and other matters regarding taxes for periods before, during and after the spin-off; and (v) a Transition Services Agreement, which provides for certain services to be performed on a transitional basis by the Company to facilitate HART's transition into a separate public reporting company. As part of the Transition Services Agreement, and for one year following the spin-off date, the Company will provide certain support services to HART, including, among others, accounting, payroll, human resources and information technology services, with the charges for the transition services generally intended to allow the Company to fully recover the costs directly associated with providing the services, plus all out-of-pocket costs and expenses.

The Company recorded revenues of approximately \$0.1 million for the three months ended March 31, 2014, as a result of the exclusive distribution rights pursuant to the Product Distribution Agreement. The Company's operating expenses were reduced by \$0.1 million for the three months ended March 31, 2014, as a result of the fees the Company charged to HART for services provided pursuant to the Transition Services Agreement. In addition, the Company's rent expense was reduced by \$40,000 for the three months ended March 31, 2014, as a result of sublease rent charged to HART pursuant to a sublease between the two companies.

David Green, who is currently a Director of the Company and was also formerly the Company's President and interim CEO, is currently the Chairman and CEO of HART.

10. Warranties

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

	Beginning Balance	Payments	Additions	Ending Balance
	(in thousands)			
Year ended December 31, 2013	\$ 222	(179)	262	\$ 305
Three months ended March 31, 2014	\$ 305	(41)	52	\$ 316

11. Employee Benefit Plans

Certain of the Company's subsidiaries in the United Kingdom, or UK, 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,	
	2014	2013
	(in thousands)	
Components of net periodic benefit cost:		
Service cost	\$ 8	\$ 74
Interest cost	221	184
Expected return on plan assets	(163)	(121)
Net amortization loss	45	57
Net periodic benefit cost	<u>\$ 111</u>	<u>\$ 194</u>

For the three months ended March 31, 2014 and 2013, the Company contributed \$0.2 million to its pension plans. The Company expects to contribute approximately \$0.6 million to its defined benefit plans during the remainder of 2014.

As of March 31, 2014 and December 31, 2013, the Company had an underfunded pension liability of approximately \$4.9 million, included in the other liabilities – non-current line item in the consolidated balance sheets.

12. Leases

Rent expense, which is recorded on a straight-line basis, is estimated to be \$1.5 million for the year ended December 31, 2014. Rent expense was \$0.4 million and \$0.3 million for the three months ended March 31, 2014 and 2013, respectively.

Future minimum lease payments for operating leases, with initial or remaining terms in excess of one year at March 31, 2014, for its continuing operations are as follows:

	Operating Leases
	(in thousands)
2015	\$ 1,265
2016	911
2017	571
2018	308
2019	178
Thereafter	461
Net minimum lease payments	<u>\$ 3,694</u>

13. Capital Stock

Common Stock

On February 5, 2008, the Company's Board of Directors adopted a Shareholder Rights Plan and declared a dividend distribution of one preferred stock purchase right for each outstanding share of the Company's common stock to shareholders of record as of the close of business on February 6, 2008. Initially, these rights will not be exercisable and will trade with the shares of the Company's common stock. Under the Shareholder Rights Plan, the rights generally will become exercisable if a person becomes an "acquiring person" by acquiring 20% or more of the common stock of the Company or if a person commences a tender offer that could result in that person owning 20% or more of the common stock of the Company. If a person becomes an acquiring person, each holder of a right (other than the acquiring person) would be entitled to purchase, at the then-current exercise price, such number of shares of preferred stock which are equivalent to shares of the Company's common stock having a value of twice the exercise price of the right. If the Company is acquired in a merger or other business combination transaction after any such event, each holder of a right would then be entitled to purchase, at the then-current exercise price, shares of the acquiring company's common stock having a value of twice the exercise price of the right.

Preferred Stock

The Company's Board of Directors has the authority to issue up to 5.0 million shares of preferred stock and to determine the price privileges and other terms of the shares. The Board of Directors may exercise this authority without any further approval of stockholders. As of March 31, 2014, the Company had no preferred stock issued or outstanding.

Employee Stock Purchase Plan (as amended, the "ESPP")

In 2000, the Company approved the ESPP. Under this 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 ESPP for the six-month periods ending June 30 and December 31. Under this plan, 750,000 shares of common stock are authorized for issuance of which 527,340 shares were issued as of March 31, 2014. During the three months ended March 31, 2014 and 2013, no shares of the Company's common stock were issued under the ESPP.

Stock-Based Payment Awards

The Company accounts for stock-based payment awards in accordance with the provisions of FASB ASC 718, which requires it to recognize compensation expense for all stock-based payment awards made to employees and directors including stock options, restricted stock units and employee stock purchases related to the ESPP.

Stock option and restricted stock unit activity under the Company's Third Amended and Restated 2000 Stock Option and Incentive Plan (as amended, the "2000 Plan") for the three months ended March 31, 2014 was as follows:

	Stock Options		Restricted Stock Units	
	Stock Options Outstanding	Weighted Average Exercise Price	Restricted Stock Units Outstanding	Grant Date Fair Value
Balance at December 31, 2013	6,690,845	\$ 3.42	463,973	\$ 4.32
Granted	25,000	4.61	-	-
Exercised	(195,925)	3.27	-	-
Vested (RSUs)	-	-	(175,768)	-
Cancelled / forfeited	(680,057)	4.94	(40,878)	4.36
Balance at March 31, 2014	<u>5,839,863</u>	\$ 3.25	<u>247,327</u>	\$ 4.34

The weighted average fair value of the options granted under the 2000 Plan during the three months ended March 31, 2014 was \$1.69, using the Black Scholes option-pricing model. There were no stock options or RSUs granted during the three months ended March 31, 2013. The following assumptions were used to estimate the fair value of stock options granted during the three months ended March 31, 2014:

	Three Months Ended March 31, 2014
Volatility	44.21%
Risk-free interest rate	1.22 %
Expected holding period	4.19 years
Dividend Yield	- %

The Company used historical volatility to calculate the expected volatility as of March 31, 2014. 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 stock options. The expected holding period of stock options represents the period of time options are expected to be outstanding and were based on historical experience. The vesting period ranges from one to four years and the contractual life is ten years.

Stock-based compensation expense related to stock options, restricted stock units and the ESPP for the three months ended March 31, 2014 and 2013 was allocated as follows:

	Three Months Ended March 31,	
	2014	2013
	(in thousands)	
Cost of product revenues	\$ 28	\$ 12
Sales and marketing	70	41
General and administrative	341	576
Research and development	8	7
Discontinued operations	-	13
Total stock-based compensation	<u>\$ 447</u>	<u>\$ 649</u>

The Company did not capitalize any stock-based compensation.

Earnings per share

Basic earnings per share is based upon net income divided by the number of weighted average common shares outstanding during the period. The calculation of diluted earnings per share assumes conversion of stock options and restricted stock units 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,	
	2014	2013
Basic	31,846,897	29,778,104
Effect of assumed conversion of employee and director stock options and restricted stock units	1,077,964	1,887,020
Diluted	<u>32,924,861</u>	<u>31,665,124</u>

Excluded from the shares used in calculating the diluted earnings per common share in the above table are options to purchase approximately 2,680,723 and 2,202,711 shares of common stock for the three months ended March 31, 2014 and 2013, respectively, as the impact of these shares would be anti-dilutive.

14. Long Term Debt

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 (the "2009 Credit Agreement"). On September 30, 2011, the Company entered into the First Amendment to the Amended and Restated Revolving Credit Loan Agreement (the "First Amendment") with Bank of America as agent, and Bank of America and Brown Brothers Harriman & Co as lenders. The First Amendment extended the maturity date of the credit facility to August 7, 2013 and reduced the interest rate to the London Interbank Offered Rate plus 3.0%. On October 4, 2012, the Company entered into the Second Amendment to the Amended and Restated Revolving Credit Loan Agreement (the "Second Amendment") with Bank of America as agent, and Bank of America and Brown Brothers Harriman & Co as lenders. The Second Amendment extended the maturity date of the credit facility to August 7, 2014.

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, that amended and restated the 2009 Credit Agreement. The Credit Agreement converted the Company's existing outstanding revolving advances into a term loan in the principal amount of \$15.0 million (the "Term Loan"), provides a revolving credit facility in the maximum principal amount of \$25.0 million ("Revolving Line") and provides a delayed draw term loan of up to \$15.0 million (the "DDTL") to fund capital contributions to the Company's former subsidiary, HART. The maximum amount available under the Credit Agreement is \$50.0 million as borrowings against the DDTL in excess of \$10.0 million results in a dollar for dollar reduction in the Revolving Line capacity. The Revolving Line has a maturity date of March 29, 2016, while the Term Loan and DDTL have a maturity date of March 29, 2018.

On October 31, 2013, the Company amended the Credit Agreement to reduce the DDTL from up to \$15.0 million to up to \$10.0 million and allow for an additional \$5.0 million to be available for drawing as advances under the Revolving Line.

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 British Bankers' Association (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 was 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 evidenced by the Credit Agreement, or the Loans, are guaranteed by all of the Company's direct and indirect domestic subsidiaries, 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 is 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, 2014 and December 31, 2013, the Company had borrowings of \$23.5 million and \$24.8 million, respectively, outstanding under its Credit Agreement. As of March 31, 2014, the Company was in compliance with all financial covenants contained in the Credit Agreement, was subject to a working capital borrowing restriction and had available borrowing capacity under its Credit Agreement of \$19.1 million. The practical borrowing capacity, however, is less due to the Company's cash generation from operating activities within the U.S.

As of March 31, 2014, the weighted effective interest rates on the Company's Term Loan, DDTL and Revolving Line borrowings were 3.96%, 3.54% and 3.15%, respectively.

As of March 31, 2014 and December 31, 2013, the Company's borrowings were comprised of:

	March 31, 2014	December 31, 2013
	(in thousands)	
Long-term debt:		
Term loan	\$ 12,000	\$ 12,750
DDTL	9,000	9,500
Revolving line	2,500	2,500
Total debt	<u>23,500</u>	<u>24,750</u>
Less: current installments	<u>(5,000)</u>	<u>(5,000)</u>
Long-term debt	<u>\$ 18,500</u>	<u>\$ 19,750</u>

15. Derivatives

The Company uses interest-rate-related derivative instruments to manage its exposure related to changes in interest rates on its variable-rate debt instruments. The Company does not enter into derivative instruments for any purpose other than cash flow hedging. The Company does not speculate using derivative instruments.

By using derivative financial instruments to hedge exposures to changes in interest rates, the Company exposes itself to credit risk and market risk. Credit risk is the failure of the counterparty to perform under the terms of the derivative contract. When the fair value of a derivative contract is positive, the counterparty owes the Company, which creates credit risk for the Company. When the fair value of a derivative contract is negative, the Company owes the counterparty and, therefore, the Company is not exposed to the counterparty's credit risk in those circumstances. The Company minimizes counterparty credit risk in derivative instruments by entering into transactions with carefully selected major financial institutions based upon their credit profile.

Market risk is the adverse effect on the value of a derivative instrument that results from a change in interest rates. The market risk associated with interest-rate contracts is managed by establishing and monitoring parameters that limit the types and degree of market risk that may be undertaken.

The Company assesses interest rate risk by continually identifying and monitoring changes in interest rate exposures that may adversely impact expected future cash flows and by evaluating hedging opportunities. The Company maintains risk management control systems to monitor interest rate risk attributable to both the Company's outstanding or forecasted debt obligations as well as the Company's offsetting hedge positions. The risk management control systems involve the use of analytical techniques, including cash flow sensitivity analysis, to estimate the expected impact of changes in interest rates on the Company's future cash flows.

The Company uses variable-rate London Interbank Offered Rate (LIBOR) debt to finance its operations. The debt obligations expose the Company to variability in interest payments due to changes in interest rates. Management believes that it is prudent to limit the variability of a portion of its interest payments. To meet this objective, management enters into LIBOR based interest rate swap agreements to manage fluctuations in cash flows resulting from changes in the benchmark interest rate of LIBOR. These swaps change the variable-rate cash flow exposure on the debt obligations to fixed cash flows. Under the terms of the interest rate swaps, the Company receives LIBOR based variable interest rate payments and makes fixed interest rate payments, thereby creating the equivalent of fixed-rate debt for the notional amount of its debt hedged. In accordance with its Credit Agreement, the Company was required to fix the rate of interest on at least 50% of its Term Loan and the DDTL through the purchase of interest rate swaps. On June 5, 2013, the Company entered into an interest rate swap contract with an original notional amount of \$15.0 million and a maturity date of March 29, 2018 in order to hedge the risk of changes in the effective benchmark interest rate (LIBOR) associated with the Company's Term Loan. On November 29, 2013, the Company entered into a second interest rate swap contract with an original notional amount of \$5.0 million and a maturity date of March 29, 2018 in order to hedge the risk of changes in the effective benchmark interest rate (LIBOR) associated with the DDTL. The Term Loan swap contract converted specific variable-rate debt into fixed-rate debt and fixed the LIBOR rate associated with the Term Loan at 0.96% plus a bank margin of 3.0%. The DDTL swap contract converted specific variable-rate debt into fixed-rate debt and fixed the LIBOR rate associated with the Term Loan at 0.93% plus a bank margin of 3.0%. The interest rate swaps were designated as cash flow hedges in accordance with ASC 815 "Derivatives and Hedging".

The following table presents the notional amount and fair value of the Company's derivative instruments as of March 31, 2014. As of March 31, 2013 the Company did not have any derivative instruments outstanding.

	March 31, 2014 Notional Amount	March 31, 2014 Fair Value (a)
	(in thousands)	
Derivatives designated as hedging instruments under ASC 815	Balance sheet classification	
Interest rate swap	\$ 16,500	\$ (38)

(a) See note 16 for the fair value measurements related to these financial instruments.

All of the Company's derivative instruments are designated as hedging instruments.

The Company has structured its interest rate swap agreements to be 100% effective and as a result, there was no impact to earnings resulting from hedge ineffectiveness. Changes in the fair value of interest rate swaps designated as hedging instruments that effectively offset the variability of cash flows associated with variable-rate, long-term debt obligations are reported in accumulated other comprehensive income (“AOCI”). These amounts subsequently are reclassified into interest expense as a yield adjustment of the hedged interest payments in the same period in which the related interest affects earnings. The Company’s interest rate swap agreement was deemed to be fully effective in accordance with ASC 815, and, as such, unrealized gains and losses related to these derivatives were recorded as AOCI.

The following table summarizes the effect of derivatives designated as cash flow hedging instruments on the Company’s consolidated statements of operations:

(In thousands)	For the Three months ended March 31, 2014		
	Amount of gain or (loss) recognized in OCI on derivative (effective portion)	Location of gain or (loss) reclassified from AOCI into income (effective portion)	Amount of gain or (loss) reclassified from AOCI into income (effective portion)
Interest rate swaps	\$ (38)	Interest expense	\$ (35)

As of March 31, 2014, \$0.1 million of deferred losses on derivative instruments accumulated in AOCI are expected to be reclassified to earnings during the next twelve months. Transactions and events expected to occur over the next twelve months that will necessitate reclassifying these derivatives’ losses to earnings include the repricing of variable-rate debt. There were no cash flow hedges discontinued during 2014 or 2013.

16. Fair Value Measurements

Fair value measurement is defined as the price that would be received to sell an asset or paid to transfer a liability in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants at the measurement date. A fair value hierarchy is established, which prioritizes the inputs used in measuring fair value into three broad levels as follows:

Level 1—Quoted prices in active markets for identical assets or liabilities.

Level 2—Inputs, other than the quoted prices in active markets, that are observable either directly or indirectly.

Level 3—Unobservable inputs based on the Company’s own assumptions.

The following table presents the fair value hierarchy for those liabilities measured at fair value on a recurring basis:

(In thousands)	Fair Value as of March 31, 2014			
	Level 1	Level 2	Level 3	Total
Liabilities:				
Interest rate swap agreements	\$ -	\$ 38	\$ -	\$ 38

The Company uses the market approach technique to value its financial liabilities. The Company’s financial liabilities carried at fair value include derivative instruments used to hedge the Company’s interest rate risks. The fair value of the Company’s interest rate swap agreements was based on LIBOR yield curves at the reporting date.

17. Income Tax

The effective income tax rate for continuing operations was 29.4% and 24.3% for the three months ended March 31, 2014 and 2013, respectively. The rate included benefits related to foreign tax rate differential, research and development tax credits and stock options, as well as offsetting discrete expense items related to certain non-deductible costs.

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," "seek," "expects," "plans," "aim," "anticipates," "believes," "estimates," "projects," "predicts," "intends," "think," "potential," "objectives," "optimistic," "strategy," "goals," "sees," "new," "guidance," "future," "continue," "drive," "growth," "long-term," "projects," "develop," "possible," "emerging," "opportunity," "pursue" 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 our actual results to differ materially from those in the forward-looking statements include sustained uncertainty concerning government spending; economic and political conditions generally and those affecting pharmaceutical and biotechnology industries; economic, political and other risks associated with international revenues and operations; the seasonal nature of purchasing in Europe; currency exchange rate fluctuations; failure of any banking institution in which we deposit our funds or its failure to provide services; our substantial debt and our ability to meet the financial covenants contained in our credit facility; our failure to raise or generate capital necessary to implement our acquisition and expansion strategy; the failure of our spin-off of Harvard Apparatus Regenerative Technology, Inc., or HART, to qualify as a transaction that is generally tax-free for U.S. federal income tax purposes; the failure of HART to indemnify us for any liabilities associated with HART's business; unanticipated costs relating to acquisitions, unanticipated costs arising in connection with our consolidation of business functions and any restructuring initiatives; our failure to expand in Asia and other emerging markets; our inability to manage our growth; competition from our competitors; our failure to expand our product offerings, introduce new products or commercialize new technologies; technological changes resulting in our products becoming obsolete; our failure to identify potential acquisition candidates and successfully close such acquisitions with favorable pricing or integrate acquired businesses or technologies; impact of any impairment of our goodwill or intangible assets; our ability to retain key personnel; failure or inadequacy of our information technology structure; rising commodity and precious metals costs; our ability to protect our intellectual property and operate without infringing on others' intellectual property; exposure to product and other liability claims; plus other factors described under the heading "Item 1A. Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2013 or described in our other public filings. Our results may also be affected by factors of which we are not currently aware. We may not update these forward-looking statements, even though our situation may change in the future, unless we have obligations under the federal securities laws to update and disclose material developments related to previously disclosed information.

Overview

Since 2009, our operations included two main businesses, the Life Science Research Tools business ("LSRT") and the Regenerative Medicine Device business ("RMD"). In December of 2012, we made the decision to divest our RMD business which we believed was the best path to maximizing value for our shareholders. On November 1, 2013, we completed the divestiture of the RMD business through the spin-off of HART to our shareholders, and the new company is now trading as a separate public reporting company on the NASDAQ stock market under the trading symbol HART. As a result, on November 1, 2013, we began reporting our RMD business segment as a discontinued operation for all historical periods presented.

In connection with the spin-off of HART, certain required adjustments were made to our outstanding equity compensation awards under our employee benefit plans. Each outstanding option to purchase Harvard Bioscience common stock was converted into both an adjusted Harvard Bioscience option to purchase Harvard Bioscience common stock and an option to purchase HART common stock. The share amounts and exercise prices of the adjusted Harvard Bioscience options and HART options, as well as the share amounts of the adjusted Harvard Bioscience restricted stock units and HART restricted stock units, were each adjusted and set in a manner to ensure the intrinsic value held by the holder pertaining to the existing Harvard Bioscience award was maintained immediately following the spin-off and was determined such that tax is not triggered under Section 409A of the Internal Revenue Code. As part of these required adjustments, we issued approximately 1.7 million options and approximately 0.1 million restricted stock units to holders of our outstanding equity compensation awards.

Following the spin-off of HART, our former RMD segment, we have one reportable segment. As such, segment results and consolidated results are the same. The costs we incurred to separate and spin-off HART are included in our continuing operations and have been classified and reported as transaction costs, within operating expenses, on our consolidated statements of income.

After the HART spin-off, our business has been aligned to focus on the growth of our LSRT business. Our goal is to be a world leading life science company that excels in meeting the needs of our customers by providing a wide breath of innovative products and solutions. Our business strategy is to have a broad range of highly specialized products that have strong positions in targeted market segments within the life science industry. 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
- providing strong technical and application service helps customers solve their problems and provides additional value to the customer.

Our growth strategy includes global expansion of sales and marketing and distribution channels, internal new product development building on our well-established brands, and acquisitions. We plan to 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 of acquired companies.

During the fourth quarter of 2013 we restructured our global operations to increase efficiency and better position them for growth. The restructuring is expected to result in overall net annual savings of approximately \$2.0 million on a pre-tax basis beginning in 2014. With a reduction of approximately \$3.0 million in personnel related costs and expenditures, approximately \$1.0 million is being reinvested primarily in expanding in China and other emerging markets, hiring for key functional roles and reinvigorating product development.

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 websites. Our websites and catalogs serve as the primary sales tools for our Physiology and Fluidics related product lines. These product lines include both proprietary manufactured products and complementary products from various suppliers. Our reputation as a leading producer in many of our manufactured products creates traffic to our website, enables cross-selling and facilitates the introduction of new products. We have field sales teams in the U.S., Canada, the United Kingdom, Germany, France and Spain. In those regions where we do not have a direct sales team, we use distributors. Revenues from direct sales to end users represented approximately 57% and 56% of our revenues for the three months ended March 31, 2014 and 2013, respectively.

Products in our Molecular and Cell analysis product lines are generally sold by distributors, and 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 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, 2014 and 2013, approximately 43% and 44% of our revenues, respectively, were derived from sales to distributors.

For the three months ended March 31, 2014, approximately 65% of our revenues were derived from products we manufacture, approximately 11% 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 and approximately 24% were derived from distributed products sold under our brand names. For the three months ended March 31, 2013, approximately 66% of our revenues were derived from products we manufacture, 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 and approximately 25% were derived from distributed products sold under our brand names.

For the three months ended March 31, 2014 and 2013, approximately 42% and 39% of our revenues, respectively, were derived from sales made by our non-U.S. operations.

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 revenues 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. 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.

Restructuring charges. Restructuring charges consist of severance, other personnel-related charges and exit costs related to plans to create organizational efficiencies and reduce operating expenses.

HART transaction costs. HART transaction costs consist of legal, accounting and other professional fees incurred to facilitate the separation and spin-off of HART. The costs have been included as a component of operating expenses on our consolidated statements of income.

Stock-based compensation expenses. Stock-based compensation expense for the three months ended March 31, 2014 and 2013 was \$0.4 million and \$0.6 million, respectively. Stock-based compensation expense related to stock options, restricted stock units, and the ESPP and was recorded as a component of cost of product revenues, sales and marketing expenses, general and administrative expenses, research and development expenses and discontinued operations.

Selected Results of Operations

Three months ended March 31, 2014 compared to three months ended March 31, 2013

	Three Months Ended March 31,		Dollar Change	% Change
	2014	2013		
	(dollars in thousands)			
Revenues	\$ 25,893	\$ 26,086	\$ (193)	-0.7%
Cost of product revenues	14,132	13,826	306	2.2%
Gross margin percentage	45.4%	47.0%	N/A	-3.4%
Sales and marketing expenses	4,432	4,539	(107)	-2.4%
General and administrative expenses	4,251	4,222	29	0.7%
Research and development expenses	973	1,013	(40)	-3.9%
Restructuring charges (credits)	137	(21)	158	-752.4%
HART transaction costs	-	503	(503)	-100.0%

Backlog.

Our order backlog was approximately \$5.6 million and \$3.9 million as of March 31, 2014 and 2013, respectively. The increase in backlog was primarily the result of the timing of customer orders and shipments. We include in backlog only those orders for which we have received valid purchase orders. Purchase orders may be cancelled at any time prior to shipment. Our backlog as of any particular date may not be representative of actual sales for any succeeding period. We typically ship our backlog at any given time within 90 days.

Revenues.

Revenues decreased \$0.2 million, or 0.7%, to \$25.9 million for the three months ended March 31, 2014 compared to \$26.1 million for the same period in 2013. Currency translation had a positive 2.0% effect on revenues for the three months ended March 31, 2014 compared to the same period in 2013 and was due primarily to the U.S. dollar's weakening in relation to the British pound sterling, the Euro and the Swedish krona. Excluding the effects of currency translation, our revenues decreased 2.7% from the previous year. Loss of work days due to winter weather in the U.S. negatively impacted our revenues during the three months ended March 31, 2014. This loss of work translated to fewer consumables being used those days.

Cost of product revenues.

Cost of product revenues increased \$0.3 million, or 2.2%, to \$14.1 million for the three months ended March 31, 2014 compared with \$13.8 million for the three months ended March 31, 2013. Gross profit as a percentage of revenues decreased to 45.4% for the year ended December 31, 2013 compared with 47.1% for the same period in 2013. The decline in margin was due primarily to lower sales volume and a less favorable product mix in the first quarter of 2014 compared with the first quarter of 2013.

Sales and marketing expenses.

Sales and marketing expenses decreased \$0.1 million, or 2.4%, to \$4.4 million for the three months ended March 31, 2014 compared with \$4.5 million for the three months ended March 31, 2013. The decrease was primarily due to lower payroll related costs, and lower advertising and promotional expenses, partially offset by the costs incurred for our first annual sales meeting held during the three months ended March 31, 2014.

General and administrative expenses.

General and administrative expenses were \$4.3 million for the three months ended March 31, 2014, an increase of \$29,000, or 0.7%, compared with the three months ended March 31, 2013. The increase was primarily due to higher severance costs, incentive bonus accruals, consulting fees and travel expenses, offset by lower stock compensation expenses.

Research and development expenses.

Research and development expenses were \$1.0 million for the three months ended March 31, 2014, a decrease of \$40,000, or 3.9%, compared with the three months ended March 31, 2013. The decrease was primarily due to lower payroll related costs and the reversal of patent related costs.

Amortization of intangible assets.

Amortization of intangible asset expenses was \$0.6 million for the three months ended March 31, 2014 compared with \$0.7 million for the three months ended March 31, 2013 and includes amortization expense of intangible assets related to our acquisitions.

Restructuring.

Restructuring charges were \$0.1 million for three months ended March 31, 2014 compared with a net credit of \$21,000 for the three months ended March 31, 2013. The increase was primarily due to additional charges recorded during the three months ended March 31, 2014 related to the company-wide restructuring plan we implemented during the year ended December 31, 2013. The 2013 Restructuring Plan realigned global operations and included a reduction of our workforce of approximately 13%, as well as the elimination of the position of Chief Operating Officer.

HART transaction costs.

HART transaction costs, which consist of corporate transaction costs related to the separation and spin-off of HART, were \$0 for the three months ended March 31, 2014 compared with \$0.5 million for the three months ended March 31, 2013.

Other (expense) income, net.

Other expense and income, net, was \$0.3 million expense and \$0.1 million expense for the three months ended March 31, 2014 and 2013, respectively. Interest expense was \$0.3 million for the three months ended March 31, 2014 compared to interest expense of \$0.1 million for the three months ended March 31, 2013. The increase in interest expense was primarily due to both higher average debt balances and interest rates during the three months ended March 31, 2014 compared to the prior year.

Income taxes.

Income tax expense from continuing operations was approximately \$0.3 million for the three months ended March 31, 2014 and 2013. The effective income tax rate from continuing operations was 29.4% for the three months ended March 31, 2014, compared with 24.3% for the same period in 2013. The difference between our effective tax rate quarter over quarter was primarily attributable to higher research and development tax credits in 2013 versus 2014 due, in part, to the expiration of the U.S. research credit at the end of 2013.

Discontinued Operations.

In September 2008, we completed the sale of assets of our Union Biometrica Division including our German subsidiary, Union Biometrica GmbH, representing the remaining portion of our 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 revenues generated by the acquired business as it was conducted by UBIO Acquisition Company over a five-year post-transaction period in an amount equal to (i) 5% of the revenues generated up to and including \$6.0 million each year and (ii) 8% of the revenues generated above \$6.0 million each year. Any earn-out amounts were evidenced by interest-bearing promissory notes due on September 30, 2013 or at an earlier date based on certain triggering events. During 2013, UBIO Acquisition Company made payments, including interest, of \$1.8 million. UBIO Acquisition Company's final payment under the earn-out obligation was received in October 2013. Included in the loss from discontinued operations, net of taxes, is a gain on disposal related to the Union Biometrica earn-out of \$0.2 million for the three months ended March 31, 2013.

On November 1, 2013, the spin-off of HART and our RMD business was completed. Through the spin-off date the historical operations of RMD were reported as continuing operations in our consolidated statements of income. Following the spin-off, the historical operations of RMD were restated and presented as discontinued operations in our consolidated statements of income. Discontinued operations include the results of the RMD business except for certain corporate overhead costs and other allocations, which remain in continuing operations. The costs we incurred to separate and spin-off the RMD business are included in our continuing operations and have been classified and reported as transaction costs, within operating expenses, on our consolidated statements of income. Loss from discontinued operations, net of taxes, related to RMD was \$1.0 million for the three months ended March 31, 2013.

Liquidity and Capital Resources

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

We ended the first quarter of 2014 with cash and cash equivalents of \$25.8 million which was unchanged from the balance at December 31, 2013. As of March 31, 2014 and December 31, 2013, we had \$23.5 million and \$24.8 million, respectively, of borrowings outstanding under our credit facility. Total cash and cash equivalents, net of debt was \$2.3 million and \$1.0 million at March 31, 2014 and December 31, 2013, respectively.

As of March 31, 2014 and December 31, 2013, cash and cash equivalents held by our foreign subsidiaries was \$24.7 million and \$23.6 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.

Condensed Cash Flow Statements
(in thousands, unaudited)

	Three Months Ended	
	March 31,	
	2014	2013
	(in thousands)	
Cash flows from operations:		
Net income	\$ 719	\$ 96
Changes in assets and liabilities	(940)	(617)
Other adjustments to operating cash flows	1,293	1,097
Net cash provided by operating activities	<u>1,072</u>	<u>576</u>
Investing activities:		
Additions to property, plant and equipment	(282)	(354)
Other investing activities	113	-
Net cash used in investing activities	<u>(169)</u>	<u>(354)</u>
Financing activities:		
Net (repayments of) proceeds from issuance of debt	(1,250)	2,049
Other financing activities	319	1,553
Net cash (used in) provided by financing activities	<u>(931)</u>	<u>3,602</u>
Effect of exchange rate changes on cash	94	(756)
Increase in cash and cash equivalents	<u>\$ 66</u>	<u>\$ 3,068</u>

Our operating activities generated cash of \$1.1 million for the three months ended March 31, 2014 compared to \$0.6 million for the three months ended March 31, 2013. The increase in cash flows from operations was primarily due to higher net income quarter over quarter.

Our investing activities used cash of \$0.2 million during the three months ended March 31, 2014, compared to \$0.4 million during the three months ended March 31, 2013. Investing activities during the first quarter 2014 included purchases of property, plant and equipment and proceeds from the sale of property, plant and equipment. Investing activities during the first quarter 2013 included purchases of property, plant and equipment. We spent \$0.3 million and \$0.4 million on capital expenditures during the three months ended March 31, 2014 and 2013, respectively. We currently expect to make approximately \$1.3 million of capital expenditures during the remainder of 2014.

Our financing activities have historically consisted of borrowings and repayments under our revolving credit facility and term loans, payments of debt issuance costs, the issuance of common stock and, unique to 2013, the transfer of cash as part of the separation and spin-off of HART. During the three months ended March 31, 2014, financing activities used cash of \$0.9 million, compared with \$3.6 million of cash provided by financing activities for the three months ended March 31, 2013. During the three months ended March 31, 2014, we repaid \$1.3 million of debt under our credit facility and term loans, and ended the quarter with \$23.5 million of borrowings. Net proceeds from the issuance of common stock for the three months ended March 31, 2014 was \$0.3 million, which related to the exercise of stock options. During the three months ended March 31, 2013, we borrowed \$2.0 million under our credit facility, and ended the quarter with \$12.0 million of borrowings. Net proceeds from the issuance of common stock for the three months ended March 31, 2013 was \$1.6 million, which related to the exercise of stock options.

Borrowing Arrangements

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 (the "2009 Credit Agreement"). On September 30, 2011, we entered into the First Amendment to the Amended and Restated Revolving Credit Loan Agreement (the "First Amendment") with Bank of America as agent, and Bank of America and Brown Brothers Harriman & Co as lenders. The First Amendment extended the maturity date of our credit facility to August 7, 2013 and reduced the interest rate to the London Interbank Offered Rate plus 3.0%. On October 4, 2012, we entered into the Second Amendment to the Amended and Restated Revolving Credit Loan Agreement (the "Second Amendment") with Bank of America as agent, and Bank of America and Brown Brothers Harriman & Co as lenders. The Second Amendment extended the maturity date of our credit facility to August 7, 2014.

On March 29, 2013, we entered into a Second Amended and Restated Revolving Credit Agreement (as amended, the “Credit Agreement”) with Bank of America, as agent, and Bank of America and Brown Brothers Harriman & Co as lenders, that amended and restated the 2009 Credit Agreement. The Credit Agreement converted our existing outstanding revolving advances into a term loan in the principal amount of \$15.0 million (the “Term Loan”), provided a revolving credit facility in the maximum principal amount of \$25.0 million (“Revolving Line”) and provided a delayed draw term loan of up to \$15.0 million (the “DDTL”) to fund our capital contributions to HART. The maximum amount available under the Credit Agreement is \$50.0 million as borrowings against the DDTL in excess of \$10.0 million result in a dollar for dollar reduction in the Revolving Line capacity. The Revolving Line has a maturity date of March 29, 2016, while the Term Loan and DDTL have a maturity date of March 29, 2018.

On October 31, 2013, we amended the Credit Agreement to reduce the DDTL from up to \$15.0 million to up to \$10.0 million and allow for an additional \$5.0 million to be available for drawing as advances under the Revolving Line.

Borrowings under the Term Loan and the DDTL 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 British Bankers’ Association (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 bears 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 were 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.

At March 31, 2014, the weighted effective interest rates on the Term Loan, DDTL and Revolving Line borrowings were 3.96%, 3.54% and 3.15%, respectively. The Credit Agreement includes covenants relating to income, debt coverage and cash flow, as well as 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. As of March 31, 2014, we were in compliance with all financial covenants contained in the Credit Agreement; we were subject to a working capital borrowing restriction and had available borrowing capacity under the Credit Agreement of \$19.1 million. The practical borrowing capacity, however, is less due our cash generation from operating activities within the U.S.

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. This may involve incurring additional debt or raising equity capital for our business. Additional capital raising activities will 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.

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, 2013, which was filed with the SEC on March 14, 2014.

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 increases in revenues of \$0.5 million and expenses of \$0.4 million during the three months ended March 31, 2014. 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.

The gain associated with the translation of foreign equity into U.S. dollars included as a component of comprehensive income, was approximately \$0.2 million during the three months ended March 31, 2014, compared to a loss of \$2.0 million three months ended March 31, 2013. In addition, currency exchange rate fluctuations included as a component of net income resulted in approximately \$81,000 in foreign currency losses during the three months ended March 31, 2014, compared to \$34,000 in foreign currency gains during the three months ended March 31, 2013.

Recently Issued Accounting Pronouncements

In April 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2014-08, “*Reporting Discontinued Operations and Disclosures of Disposals of Components of an Entity*”, which changes the criteria for reporting discontinued operations and enhances convergence of the FASB’s and the International Accounting Standard Board’s (IASB) reporting requirements for discontinued operations. The ASU is effective prospectively for fiscal years, and interim periods within those years, beginning after December 15, 2014. We believe the adoption of this guidance will not have a material impact on our consolidated financial position, results of operations or cash flows due to the prospective application of the guidance. Future disposals will be assessed based on this new guidance, which may have an impact on our consolidated financial position, results of operations or cash flows.

In July 2013, the FASB issued ASU 2013-11, “*Income Taxes (Topic 740): Presentation of an Unrecognized Tax Benefit When a Net Operating Loss Carryforward, a Similar Tax Loss, or a Tax Credit Carryforward Exists*”, which requires an entity to present an unrecognized tax benefit as a reduction of a deferred tax asset for a net operating loss (NOL) carryforward, or similar tax loss or tax credit carryforward, rather than as a liability when the uncertain tax position would reduce the NOL or other carryforward under the tax law. The ASU is effective prospectively for fiscal years, and interim periods within those years, beginning after December 15, 2013. The adoption of this guidance did not have a material impact on our consolidated financial position, results of operations or cash flows.

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, our websites, 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, 2014, we had \$23.5 million outstanding under our Credit Agreement. The purpose of the Credit Agreement was to convert our existing outstanding revolving advances into a Term Loan in the principal amount of \$15.0 million, provide a Revolving Line facility in the maximum principal amount of \$25.0 million, and provide a DDTL of up to \$10.0 million, reduced from \$15.0 million as discussed below, to fund capital contributions to our subsidiary, HART. The Revolving Line has a maturity date of March 29, 2016, while the Term Loan and DDTL have a maturity date of March 29, 2018. On October 31, 2013, we amended the Credit Agreement to reduce the DDTL from up to \$15.0 million to up to \$10.0 million and allow for an additional \$5.0 million to be available for drawing as advances under the Revolving Line.

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 were 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 are 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. Effective June 5, 2013, we entered into an interest rate swap contract with a notional amount of \$15 million and a maturity date of March 29, 2018 in order to hedge the risk of changes in the effective benchmark interest rate (LIBOR) associated with our Term Loan. The swap contract converted specific variable-rate debt into fixed-rate debt and fixed LIBOR associated with the Term Loan at 0.96% plus a bank margin of 3.0%. Effective November 29, 2013, we entered into a second interest rate swap contract with a notional amount of \$5.0 million and a maturity date of March 29, 2018 in order to hedge the risk of changes in LIBOR associated with a portion of our DDTL. The swap contract converted specific variable-rate debt into fixed rate debt and fixed LIBOR associated with half of the DDTL amount at 0.93% plus a bank margin of 3.0%. These swap contracts were associated with reducing or eliminating interest rate risk and were designated as a cash flow hedge instruments in accordance with ASC 815 “Derivatives and Hedging”. We use interest-rate-related derivative instruments to manage our exposure related to changes in interest rates on our variable-rate debt instruments. We do not enter into derivative instruments for any purpose other than cash flow hedging and we do not speculate using derivative instruments.

As of March 31, 2014, the weighted effective interest rates on the Company's Term Loan, DDTL and Revolving Line borrowings were 3.96%, 3.54% and 3.15%, respectively. Assuming no other changes which would affect the margin of the interest rate under our Term Loan, DDTL and Revolving Line, the effect of interest rate fluctuations on outstanding borrowings under our Credit Agreement as of March 31, 2014 over the next twelve months is quantified and summarized as follows:

If compared to the rate as of March 31, 2014	Interest expense increase	
	(in thousands)	
Interest rates increase by 1%	\$	70
Interest rates increase by 2%	\$	140

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, 2014. 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 three months ended March 31, 2014 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.

To our knowledge, there has been no material changes, other than those listed below, in the risk factors described in "Item 1A. Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2013, which was filed with the SEC on March 14, 2014.

New regulations related to conflict minerals may force us to incur additional expenses and otherwise adversely impact our business.

The SEC has promulgated final rules mandated by the Dodd-Frank Act regarding disclosure of the use of tin, tantalum, tungsten and gold, known as conflict minerals, in products manufactured by public companies. These new rules require ongoing due diligence to determine whether such minerals originated from the Democratic Republic of Congo (the DRC) or an adjoining country and whether such minerals helped finance the armed conflict in the DRC. Reporting obligations for the rule begin May 31, 2014 and are required annually thereafter. There will be costs associated with complying with these disclosure requirements, including costs to determine the origin of conflict minerals in our products. The implementation of these rules and their effect on customer, supplier and/or consumer behavior could adversely affect the sourcing, supply and pricing of materials used in our products. As a result, we may also incur costs with respect to potential changes to products, processes or sources of supply. We may face disqualification as a supplier for customers and reputational challenges if the due diligence procedures we implement do not enable us to verify the origins for all conflict minerals used in our products, including that such minerals did not originate from any of the covered conflict countries. Accordingly, the implementation of these rules could have a material adverse effect on our business, results of operations and/or financial condition.

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.

INDEX TO EXHIBITS

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.

Certification

I, Robert E. Gagnon, 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 8, 2014

/s/ ROBERT E. GAGNON

Robert E. Gagnon
Chief Financial Officer

Certification

I, Jeffrey A. Duchemin, 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 8, 2014

/s/ JEFFREY A. DUCHEMIN

Jeffrey A. Duchemin
Chief Executive Officer

**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, 2014 (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 8, 2014

/s/ ROBERT E. GAGNON

Name: Robert E. Gagnon

Title: Chief Financial Officer

**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, 2014 (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 8, 2014

/s/ JEFFREY A. DUCHEMIN

Name: Jeffrey A. Duchemin

Title: Chief Executive Officer