

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549**

FORM 10-Q

Quarterly report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the quarterly period ended September 30, 2015

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)

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

04-3306140
(IRS Employer
Identification No.)

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 Accelerated filer

Non-accelerated filer (Do not check if a smaller reporting company) Smaller reporting company

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

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

As of October 30, 2015, there were 33,944,207 shares of common stock, par value \$0.01 per share, outstanding.

HARVARD BIOSCIENCE, INC.
FORM 10-Q
For the Quarter Ended September 30, 2015

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PART I. FINANCIAL INFORMATION**Item 1. Financial Statements**

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

| | September 30, 2015 | December 31, 2014 |
|--|-----------------------|----------------------|
| Assets | | |
| Current assets: | | |
| Cash and cash equivalents | \$ 6,090 | \$ 14,134 |
| Accounts receivable, net of allowance for doubtful accounts of \$330 and \$328, respectively | 15,590 | 16,141 |
| Inventories | 23,011 | 20,531 |
| Deferred income tax assets - current | 2,563 | 1,515 |
| Other receivables and other assets | 5,070 | 4,742 |
| Total current assets | 52,324 | 57,063 |
| Property, plant and equipment, net | 5,934 | 5,190 |
| Deferred income tax assets - non-current | 11,046 | 11,056 |
| Amortizable intangible assets, net | 21,813 | 21,153 |
| Goodwill | 40,858 | 39,822 |
| Other indefinite lived intangible assets | 1,231 | 1,252 |
| Other assets | 349 | 380 |
| Total assets | \$ 133,555 | \$ 135,916 |
| Liabilities and Stockholders' Equity | | |
| Current liabilities: | | |
| Current portion, long-term debt | \$ 5,000 | \$ 5,000 |
| Accounts payable | 6,322 | 6,294 |
| Deferred revenue | 795 | 655 |
| Accrued income taxes | 214 | 554 |
| Accrued expenses | 3,840 | 4,452 |
| Deferred income tax liabilities - current | 244 | 121 |
| Other liabilities - current | 855 | 1,023 |
| Total current liabilities | 17,270 | 18,099 |
| Long-term debt, less current installments | 15,150 | 16,450 |
| Deferred income tax liabilities - non-current | 2,256 | 1,325 |
| Other long term liabilities | 4,593 | 4,574 |
| Total liabilities | 39,269 | 40,448 |
| 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; 41,689,714 and 40,308,763 shares issued and 33,944,207 and 32,563,256 shares outstanding, respectively | 416 | 397 |
| Additional paid-in-capital | 210,655 | 206,656 |
| Accumulated deficit | (94,583) | (92,684) |
| Accumulated other comprehensive loss | (11,534) | (8,233) |
| Treasury stock at cost, 7,745,507 common shares | (10,668) | (10,668) |
| Total stockholders' equity | 94,286 | 95,468 |
| Total liabilities and stockholders' equity | \$ 133,555 | \$ 135,916 |

See accompanying notes to unaudited consolidated financial statements.

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

| | Three Months Ended | | Nine Months Ended | |
|---|--------------------|-------------------|-------------------|-----------------|
| | September 30, | | September 30, | |
| | 2015 | 2014 | 2015 | 2014 |
| Revenues | \$ 25,731 | \$ 25,448 | \$ 80,294 | \$ 78,299 |
| Cost of revenues (exclusive of items shown separately below) | 14,005 | 14,006 | 44,495 | 42,818 |
| Gross profit | <u>11,726</u> | <u>11,442</u> | <u>35,799</u> | <u>35,481</u> |
| Sales and marketing expenses | 5,028 | 4,113 | 15,355 | 13,102 |
| General and administrative expenses | 5,005 | 4,130 | 14,758 | 12,378 |
| Research and development expenses | 1,426 | 1,059 | 4,888 | 3,316 |
| Restructuring charges | 376 | 97 | 487 | 349 |
| Amortization of intangible assets | 666 | 618 | 2,137 | 1,839 |
| Total operating expenses | <u>12,501</u> | <u>10,017</u> | <u>37,625</u> | <u>30,984</u> |
| Operating (loss) income | <u>(775)</u> | <u>1,425</u> | <u>(1,826)</u> | <u>4,497</u> |
| Other income (expense): | | | | |
| Foreign exchange | 70 | - | 159 | (148) |
| Interest expense | (204) | (239) | (641) | (752) |
| Interest income | 1 | 19 | 5 | 45 |
| Other expense | (188) | (249) | (984) | (397) |
| Other expense, net | <u>(321)</u> | <u>(469)</u> | <u>(1,461)</u> | <u>(1,252)</u> |
| (Loss) income before income taxes | (1,096) | 956 | (3,287) | 3,245 |
| Income tax (benefit) expense | (249) | 323 | (1,388) | 871 |
| Net (loss) income | <u>\$ (847)</u> | <u>\$ 633</u> | <u>\$ (1,899)</u> | <u>\$ 2,374</u> |
| (Loss) earnings per share: | | | | |
| Basic (loss) earnings per common share | <u>\$ (0.02)</u> | <u>\$ 0.02</u> | <u>\$ (0.06)</u> | <u>\$ 0.07</u> |
| Diluted (loss) earnings per common share | <u>\$ (0.02)</u> | <u>\$ 0.02</u> | <u>\$ (0.06)</u> | <u>\$ 0.07</u> |
| Weighted average common shares: | | | | |
| Basic | <u>33,933</u> | <u>32,342</u> | <u>33,474</u> | <u>32,080</u> |
| Diluted | <u>33,933</u> | <u>33,415</u> | <u>33,474</u> | <u>33,097</u> |
| Comprehensive (loss) income: | | | | |
| Net (loss) income | \$ (847) | \$ 633 | \$ (1,899) | \$ 2,374 |
| Foreign currency translation adjustments | (526) | (3,168) | (3,263) | (2,584) |
| Derivatives qualifying as hedges, net of tax: | | | | |
| (Loss) gain on derivative instruments designated and qualifying as cash flow hedges | (39) | 23 | (110) | (57) |
| Amounts reclassified from accumulated other comprehensive loss to net (loss) income | 22 | 31 | 72 | 100 |
| Unrealized losses on pension benefit obligation, net of tax | - | - | - | (484) |
| Total comprehensive loss | <u>\$ (1,390)</u> | <u>\$ (2,481)</u> | <u>\$ (5,200)</u> | <u>\$ (651)</u> |

See accompanying notes to unaudited consolidated financial statements.

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

| | Nine Months Ended September 30, | |
|---|------------------------------------|------------------|
| | 2015 | 2014 |
| Cash flows from operating activities: | | |
| Net (loss) income | \$ (1,899) | \$ 2,374 |
| Adjustments to reconcile net (loss) income to net cash (used in) provided by operating activities: | | |
| Stock compensation expense | 2,049 | 1,534 |
| Depreciation | 1,157 | 913 |
| Loss on disposal of fixed assets | 25 | 8 |
| Non-cash restructuring credits | (79) | (120) |
| Amortization of catalog costs | 8 | 37 |
| Provision (recovery) for allowance for doubtful accounts | 3 | (34) |
| Amortization of intangible assets | 2,137 | 1,839 |
| Amortization of deferred financing costs | 58 | 46 |
| Deferred income taxes | (1,024) | 259 |
| Changes in operating assets and liabilities: | | |
| Decrease (increase) in accounts receivable | 754 | (557) |
| Increase in inventories | (1,310) | (2,649) |
| Increase in other receivables and other assets | (407) | (466) |
| Increase in trade accounts payable | 35 | 446 |
| Decrease in accrued income taxes | (362) | (107) |
| Decrease in accrued expenses | (2,046) | (486) |
| Increase (decrease) in deferred revenue | 158 | (38) |
| (Decrease) increase in other liabilities | (316) | 89 |
| Net cash (used in) provided by operating activities | <u>(1,059)</u> | <u>3,088</u> |
| Cash flows (used in) provided by investing activities: | | |
| Additions to property, plant and equipment | (2,298) | (1,224) |
| Proceeds from sales of property, plant and equipment | 6 | 76 |
| Acquisitions, net of cash acquired | (4,545) | - |
| Net cash used in investing activities | <u>(6,837)</u> | <u>(1,148)</u> |
| Cash flows provided by (used in) financing activities: | | |
| Proceeds from issuance of debt | 4,800 | 2,200 |
| Repayments of debt | (6,100) | (3,750) |
| Payments of debt issuance costs | (32) | - |
| Net proceeds from issuance of common stock | 1,953 | 1,415 |
| Net cash provided by (used in) financing activities | <u>621</u> | <u>(135)</u> |
| Effect of exchange rate changes on cash | (769) | (842) |
| (Decrease) increase in cash and cash equivalents | (8,044) | 963 |
| Cash and cash equivalents at the beginning of period | 14,134 | 25,771 |
| Cash and cash equivalents at the end of period | <u>\$ 6,090</u> | <u>\$ 26,734</u> |
| Supplemental disclosures of cash flow information: | | |
| Cash paid for interest | \$ 625 | \$ 757 |
| Cash paid for income taxes, net of refunds | \$ 625 | \$ 451 |

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 September 30, 2015 and for the three and nine months ended September 30, 2015 and 2014 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, 2014 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, 2014, which was filed with the SEC on March 12, 2015.

In the opinion of management, all adjustments, which include normal recurring adjustments necessary to present a fair statement of financial position as of September 30, 2015, results of operations and comprehensive loss for the three and nine months ended September 30, 2015 and 2014 and cash flows for the nine months ended September 30, 2015 and 2014, as applicable, have been made. The results of operations for the three and nine months ended September 30, 2015 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, 2014, which was filed with the SEC on March 12, 2015.

2. Recently Issued Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2014-09, “*Revenue from Contracts with Customers*,” a new accounting standard that provides for a comprehensive model to use in the accounting for revenue arising from contracts with customers that will replace most existing revenue recognition guidance in U.S. GAAP. Under this standard, revenue will be recognized to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the Company expects to be entitled in exchange for those goods or services. At its July 2015 meeting, the FASB agreed to defer the mandatory effective date of ASU 2014-09 one year. Under the one year deferral, the standard will take effect in 2018 for calendar year-end public entities. The Company is assessing the new standard and has not yet determined the impact to the consolidated financial statements.

In April 2015, the FASB issued ASU 2015-03, *Interest - Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs*. The update requires debt issuance costs related to a recognized debt liability to be presented in the balance sheet as a direct deduction from the carrying amount of the related debt liability, instead of being presented as an asset. Debt disclosures will include the face amount of the debt liability and the effective interest rate. The update requires retrospective application and represents a change in accounting principle. The update is effective for fiscal years beginning after December 15, 2015. Early adoption is permitted for financial statements that have not been previously issued. The Company is evaluating the impact of ASU 2015-03 on its consolidated financial statements and the possibility of early adoption by the Company.

In July 2015, the FASB issued ASU 2015-11, *Simplifying Measurement of Inventory*. The update requires measurement of most inventory “at the lower of cost and net realizable value”, and applies to all entities that recognize inventory within the scope of ASC 330, except for inventory measured under the last-in, first-out (LIFO) method or the retail inventory method (RIM). ASU 2015-11 requires prospective application and represents a change in accounting principle. The update is effective for fiscal years beginning after December 15, 2016. Early adoption is permitted for financial statements that have not been previously issued. The Company is evaluating the impact of ASU 2015-11 on its consolidated financial statements and the possibility of early adoption by the Company.

In September 2015, the FASB issued ASU 2015-16, *Simplifying the Accounting for Measurement-Period Adjustments*. The update eliminates the requirement to retrospectively adjust financial statements for measurement-period adjustments that occur in periods after a business combination. Under the update, measurement-period adjustments are to be calculated as if they were known at the acquisition date, but are recognized in the reporting period in which they are determined. Additional disclosures are required about the impact on current-period earnings. ASU 2015-16 requires prospective application to adjustments of provisional amounts that occur after the effective date. The update is effective for fiscal years beginning after December 15, 2016. Early adoption is permitted for financial statements that have not been previously issued. The Company is evaluating the impact of ASU 2015-16 on its consolidated financial statements and the possibility of early adoption by the Company.

3. Accumulated Other Comprehensive Loss

Changes in each component of accumulated other comprehensive loss, 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, 2014 | \$ (4,658) | \$ (18) | \$ (3,557) | \$ (8,233) |
| Other comprehensive loss before reclassifications | (3,263) | (110) | - | (3,373) |
| Amounts reclassified from AOCI | - | 72 | - | 72 |
| Other comprehensive loss | (3,263) | (38) | - | (3,301) |
| Balance at September 30, 2015 | <u>\$ (7,921)</u> | <u>\$ (56)</u> | <u>\$ (3,557)</u> | <u>\$ (11,534)</u> |

4. Acquisitions

The Company completed one acquisition during the nine months ended September 30, 2015.

HEKA Elektronik

On January 8, 2015, the Company, through its wholly-owned Ealing Scientific Limited and Multi Channel Systems MCS GmbH (“MCS”) subsidiaries, acquired all of the issued and outstanding shares of HEKA Elektronik (“HEKA”) for approximately \$5.9 million, or \$4.5 million, net of cash acquired. Included in the acquisition of HEKA are: HEKA Elektronik Dr. Schulze GmbH, based in Lambrecht, Germany (“HEKA Germany”); HEKA Electronics Incorporated, based in Chester, Nova Scotia, Canada (“HEKA Canada”); and HEKA Instruments Incorporated, based in Bellmore, New York. The Company funded the acquisition from its existing cash balances.

HEKA is a developer, manufacturer and marketer of sophisticated electrophysiology instrumentation and software for biomedical and industrial research applications. This acquisition is complementary to the electrophysiology line currently offered by the Company’s wholly-owned Warner Instruments and MCS subsidiaries.

The aggregate purchase price for this acquisition was preliminarily allocated to tangible and intangible assets acquired as follows:

| | (in thousands) |
|--|-----------------|
| Tangible assets | \$ 4,165 |
| Liabilities assumed | (2,819) |
| Net assets | 1,346 |
| Goodwill and intangible assets: | |
| Goodwill | 2,061 |
| Trade name | 774 |
| Customer relationships | 1,627 |
| Developed technology | 1,338 |
| Non-compete agreements | 27 |
| Deferred tax liabilities | (1,245) |
| Total goodwill and intangible assets, net of tax | 4,582 |
| Acquisition purchase price | <u>\$ 5,928</u> |

The estimated purchase price allocation is preliminary and subject to revision. A valuation of the assets acquired and liabilities assumed is being conducted and the final allocation will be made when completed.

Goodwill recorded as a result of the acquisition of HEKA is not deductible for tax purposes.

The results of operations for HEKA have been included in the Company's consolidated financial statements from the date of acquisition and are not material.

The following consolidated pro forma information is based on the assumption that the acquisition of HEKA occurred on January 1, 2014. Accordingly, the historical results have been adjusted to reflect amortization expense that would have been recognized on such a pro forma basis. The pro forma information is presented for comparative purposes only and is not necessarily indicative of the financial position or results of operations which would have been reported had we completed the acquisition during these periods or which might be reported in the future.

| | Three Months Ended | Nine Months Ended |
|------------|---------------------------|---------------------------|
| | September 30, 2014 | September 30, 2014 |
| | (in thousands) | |
| Pro Forma | | |
| Revenues | \$ 26,829 | \$ 82,441 |
| Net income | 707 | 2,597 |

The Company completed two acquisitions during 2014.

Multi Channel Systems MCS GmbH

On October 1, 2014, the Company, through its wholly-owned Biochrom Limited subsidiary, acquired all of the issued and outstanding shares of Multi Channel Systems MCS GmbH, which has its principal offices in Germany, for approximately \$11.2 million, including a working capital adjustment. The Company funded the acquisition from its existing cash balances.

MCS is a developer, manufacturer and marketer of in vitro and in vivo electrophysiology instrumentation for extracellular recording and stimulation. This acquisition is complementary to the in vitro electrophysiology line currently offered by the Company's wholly-owned Warner Instruments subsidiary.

The aggregate purchase price for this acquisition was allocated to tangible and intangible assets acquired as follows:

| | (in thousands) | |
|--|----------------|---------|
| Tangible assets | \$ | 5,442 |
| Liabilities assumed | | (1,207) |
| Net assets | | 4,235 |
| Goodwill and intangible assets: | | |
| Goodwill | | 3,745 |
| Trade name | | 1,008 |
| Customer relationships | | 1,204 |
| Developed technology | | 2,452 |
| Non-compete agreements | | 148 |
| Deferred tax liabilities | | (1,603) |
| Total goodwill and intangible assets, net of tax | | 6,954 |
| Acquisition purchase price | \$ | 11,189 |

Goodwill recorded as a result of the acquisition of MCS is not deductible for tax purposes.

The results of operations for MCS have been included in the Company's consolidated financial statements from the date of acquisition and are not material.

The following consolidated pro forma information is based on the assumption that the acquisition of MCS occurred on January 1, 2014. Accordingly, the historical results have been adjusted to reflect amortization expense that would have been recognized on such a pro forma basis. The pro forma information is presented for comparative purposes only and is not necessarily indicative of the financial position or results of operations which would have been reported had we completed the acquisition during these periods or which might be reported in the future.

| | Three Months Ended | Nine Months Ended |
|------------|---------------------------|---------------------------|
| | September 30, 2014 | September 30, 2014 |
| | (in thousands) | |
| Pro Forma | | |
| Revenues | \$ 27,209 | \$ 83,702 |
| Net income | 713 | 2,619 |

Triangle BioSystems, Inc.

On October 1, 2014, the Company acquired all of the issued and outstanding shares of Triangle BioSystems, Inc. ("TBSI"), which has its principal offices in North Carolina, for approximately \$2.2 million, including a working capital adjustment. The Company funded the acquisition from borrowings under its credit facility.

TBSI is a developer, manufacturer and marketer of wireless neural interface equipment to aid in vivo neuroscience research, especially in the fields of electrophysiology, psychology, neurology and pharmacology. This acquisition is complementary to the behavioral neuroscience lines currently offered by the Company's wholly-owned Panlab and Coulbourn subsidiaries.

The aggregate purchase price for this acquisition was allocated to tangible and intangible assets acquired as follows:

| | (in thousands) |
|--|----------------|
| Tangible assets | \$ 1,278 |
| Liabilities assumed | (530) |
| Net assets | 748 |
| Goodwill and intangible assets: | |
| Goodwill | 946 |
| Trade name | 143 |
| Customer relationships | 308 |
| Developed technology | 363 |
| Non-compete agreements | 30 |
| Deferred tax liabilities | (325) |
| Total goodwill and intangible assets, net of tax | 1,465 |
| Acquisition purchase price | \$ 2,213 |

The results of operations for TBSI have been included in the Company's consolidated financial statements from the date of acquisition and are not material. The Company considers this acquisition immaterial for the purposes of proforma financial statement disclosures. Goodwill recorded as a result of the acquisition of TBSI is not deductible for tax purposes.

Direct acquisition costs recorded in other expense, net in the Company's consolidated statements of operations were \$0.2 million and \$0.9 million for the three and nine months ended September 30, 2015, respectively, and \$0.3 million and \$0.4 million for the three and nine months ended September 30, 2014, respectively.

5. Goodwill and Other Intangible Assets

Intangible assets consist of the following:

| | September 30, 2015 | | December 31, 2014 | | Weighted Average Life (a) | |
|---|--------------------|--------------------------|-------------------|--------------------------|---------------------------|-------|
| | (in thousands) | | | | | |
| Amortizable intangible assets: | Gross | Accumulated Amortization | Gross | Accumulated Amortization | | |
| Existing technology | \$ 16,287 | \$ (11,620) | \$ 15,538 | \$ (11,198) | 7.5 | Years |
| Trade names | 7,685 | (2,954) | 7,114 | (2,557) | 9.2 | Years |
| Distribution agreements/customer relationships | 23,818 | (11,568) | 22,730 | (10,681) | 10.2 | Years |
| Patents | 250 | (85) | 256 | (49) | 3.4 | Years |
| Total amortizable intangible assets | <u>48,040</u> | <u>\$ (26,227)</u> | <u>45,638</u> | <u>\$ (24,485)</u> | | |
| Indefinite-lived intangible assets: | | | | | | |
| Goodwill | 40,858 | | 39,822 | | | |
| Other indefinite-lived intangible assets | 1,231 | | 1,252 | | | |
| Total goodwill and other indefinite-lived intangible assets | <u>42,089</u> | | <u>41,074</u> | | | |
| Total intangible assets | <u>\$ 90,129</u> | | <u>\$ 86,712</u> | | | |

(a) Weighted average life as of September 30, 2015.

The change in the carrying amount of goodwill for the nine months ended September 30, 2015 is as follows:

| | (in thousands) |
|---|------------------|
| Balance at December 31, 2014 | \$ 39,822 |
| Goodwill arising from business combinations | 2,061 |
| Effect of change in currency translation | (1,025) |
| Balance at September 30, 2015 | <u>\$ 40,858</u> |

Intangible asset amortization expense was \$0.7 million and \$0.6 million for the three months ended September 30, 2015 and 2014, respectively. Intangible asset amortization expense was \$2.1 million and \$1.8 million for the nine months ended September 30, 2015 and 2014, respectively. Amortization expense of existing amortizable intangible assets is currently estimated to be \$2.8 million for the year ending December 31, 2015, \$2.8 million for the year ending December 31, 2016, \$2.5 million for the year ending December 31, 2017, \$2.3 million for the year ending December 31, 2018 and \$2.2 million for the year ending December 31, 2019.

6. Inventories

Inventories consist of the following:

| | September 30, 2015 | December 31, 2014 |
|-----------------|-----------------------|----------------------|
| | (in thousands) | |
| Finished goods | \$ 10,169 | \$ 10,138 |
| Work in process | 949 | 946 |
| Raw materials | 11,893 | 9,447 |
| Total | <u>\$ 23,011</u> | <u>\$ 20,531</u> |

7. Property, Plant and Equipment

Property, plant and equipment consist of the following:

| | September 30, 2015 | December 31, 2014 |
|--|-----------------------|----------------------|
| | (in thousands) | |
| Land, buildings and leasehold improvements | \$ 2,635 | \$ 2,595 |
| Machinery and equipment | 10,129 | 10,102 |
| Computer equipment and software | 7,356 | 6,322 |
| Furniture and fixtures | 1,353 | 1,125 |
| Automobiles | 106 | 56 |
| | <u>21,579</u> | <u>20,200</u> |
| Less: accumulated depreciation | <u>(15,645)</u> | <u>(15,010)</u> |
| Property, plant and equipment, net | <u>\$ 5,934</u> | <u>\$ 5,190</u> |

8. Restructuring and Other Exit Costs

Q2 2015 Restructuring Plan

During the second quarter of 2015, management of Harvard Bioscience initiated a plan to consolidate the manufacturing operations of HEKA Canada to HEKA Germany in order to create organizational efficiencies. No further charges are expected to be incurred on this matter. At September 30, 2015, the Company has no remaining liability related to this plan on its balance sheet. Activity and liability balances related to these charges were as follows:

| | <u>Severance Costs</u> (in thousands) |
|---|--|
| Restructuring charges | \$ 14 |
| Cash payments | (14) |
| Restructuring balance at September 30, 2015 | <u>\$ -</u> |

Q1 2015 Restructuring Plan

During the first quarter of 2015, management of Harvard Bioscience initiated a plan to relocate certain manufacturing operations in order to create organizational efficiencies and reduce operating expenses. The 2015 restructuring plan included plans to consolidate the manufacturing operations of its Coulbourn subsidiary to its headquarters in Holliston, MA. During the nine months ended September 30, 2015, the Company recorded restructuring charges of approximately \$0.2 million. Payments related to this plan are expected to be made through the end of 2015. Activity and liability balances related to these charges were as follows:

| | <u>Severance Costs</u> | <u>Other</u> | <u>Total</u> |
|---|------------------------|--------------|--------------|
| | (in thousands) | | |
| Restructuring charges | \$ 126 | 46 | \$ 172 |
| Non-cash reversal of restructuring charges | (6) | - | (6) |
| Cash payments | (59) | (32) | (91) |
| Restructuring balance at September 30, 2015 | <u>\$ 61</u> | <u>14</u> | <u>\$ 75</u> |

2014 Restructuring Plan

During the fourth quarter of 2014, management of Harvard Bioscience initiated a plan to relocate certain distribution and manufacturing operations in order to create organizational efficiencies and reduce operating expenses. The 2014 restructuring plan included plans to relocate the distribution operations of the Company's Denville subsidiary from New Jersey to North Carolina, as well as consolidating the manufacturing operations of its Biochrom subsidiary to its headquarters in Holliston, MA. Payments related to this plan are expected to be made through the end of 2015. Activity and liability balances related to these charges were as follows:

| | <u>Severance Costs</u> | <u>Other</u> | <u>Total</u> |
|---|------------------------|--------------|--------------|
| | (in thousands) | | |
| Restructuring balance at December 31, 2014 | \$ 626 | \$ - | \$ 626 |
| Restructuring charges | 87 | 293 | 380 |
| Non-cash reversal of restructuring charges | (73) | - | (73) |
| Cash payments | (577) | (263) | (840) |
| Effect of change in currency translation | (8) | - | (8) |
| Restructuring balance at September 30, 2015 | <u>\$ 55</u> | <u>\$ 30</u> | <u>\$ 85</u> |

2013 Restructuring Plan

During the fourth quarter of 2013, the management of Harvard Bioscience initiated a plan to realign global operations to improve 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. No further charges are expected to be incurred on this matter. At December 31, 2014 and September 30, 2015, the Company had no remaining liability related to this plan on its balance sheet. Activity and liability balances related to these charges in 2014 were as follows:

| | <u>Severance and Related Costs</u> | <u>Fixed Asset Write Offs</u> | <u>Other</u> | <u>Total</u> |
|---|------------------------------------|-------------------------------|--------------|--------------|
| | (in thousands) | | | |
| Restructuring balance at December 31, 2013 | \$ 1,434 | \$ - | \$ - | \$ 1,434 |
| Restructuring charges | 199 | 13 | 257 | 469 |
| Non-cash reversal of restructuring charges | (117) | (13) | - | (130) |
| Cash payments | (1,447) | - | (234) | (1,681) |
| Restructuring balance at September 30, 2014 | <u>\$ 69</u> | <u>\$ -</u> | <u>\$ 23</u> | <u>\$ 92</u> |

2012 Restructuring Plan

During 2012, the management of Harvard Bioscience initiated a plan to reduce operating expenses at one of its foreign subsidiaries. No further charges are expected to be incurred on this matter. At December 31, 2014 and September 30, 2015, the Company had no remaining liability related to this plan on its balance sheet. Activity and liability balances related to these charges in 2014 were as follows:

| | <u>Severance and Related Costs</u> |
|---|------------------------------------|
| | (in thousands) |
| Restructuring balance at December 31, 2013 | \$ 3 |
| Non-cash reversal of restructuring charges | (3) |
| Restructuring balance at September 30, 2014 | <u>\$ -</u> |

Aggregate net restructuring charges for the three and nine months ended September 30, 2015 and 2014 were as follows:

| | <u>Three Months Ended</u> | | <u>Nine Months Ended</u> | |
|-----------------------|---------------------------|-------------|--------------------------|-------------|
| | <u>September 30,</u> | | <u>September 30,</u> | |
| | <u>2015</u> | <u>2014</u> | <u>2015</u> | <u>2014</u> |
| | (in thousands) | | | |
| Restructuring charges | \$ 376 | \$ 97 | \$ 487 | \$ 349 |

9. Related Party Transactions

As part of the acquisitions of MCS and TBSI, the Company signed lease agreements with the former owners of the acquired companies. The principals of such former owners were employees of the Company as of September 30, 2015. Pursuant to the lease agreement, the Company incurred rent expense of approximately \$59,000 and \$172,000 to the former owners of MCS for the three and nine months ended September 30, 2015, respectively. Pursuant to the lease agreement, the Company incurred rent expense of approximately \$11,000 and \$32,000 to the former owner of TBSI for the three and nine months ended September 30, 2015, respectively.

10. Warranties

Warranties are estimated and accrued at the time revenues are recorded. A rollforward of the Company's product warranty accrual is as follows:

| | Beginning Balance | Payments | Additions/ (Credits) | Ending Balance |
|--------------------------------------|------------------------------|-----------------|---------------------------------|---------------------------|
| | (in thousands) | | | |
| Year ended December 31, 2014 | \$ 305 | (102) | 49 | \$ 252 |
| Nine months ended September 30, 2015 | \$ 252 | (73) | (33) | \$ 146 |

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. As of the quarter ended September 30, 2014, the principal employer of the Harvard Apparatus Limited pension plan was changed from Harvard Apparatus Limited to Biochrom Limited. As of the quarter ended June 30, 2014, these defined benefit pension plans were closed to new employees, as well as closed to the future accrual of benefits for existing employees. The components of the Company's defined benefit pension expense were as follows:

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|---|--------------|--|---------------|
| | 2015 | 2014 | 2015 | 2014 |
| | (in thousands) | | | |
| Components of net periodic benefit cost: | | | | |
| Interest cost | 175 | 200 | 542 | 649 |
| Expected return on plan assets | (165) | (147) | (510) | (478) |
| Net amortization loss | 75 | 40 | 231 | 131 |
| Net periodic benefit cost | <u>\$ 85</u> | <u>\$ 93</u> | <u>\$ 263</u> | <u>\$ 302</u> |

For the three months ended September 30, 2015 and 2014, the Company contributed \$0.2 million, for both periods, to its defined benefit pension plans. For the nine months ended September 30, 2015 and 2014, the Company contributed \$0.6 million, for both periods, to its defined benefit pension plans. The Company expects to contribute approximately \$0.2 million to its defined benefit pension plans during the remainder of 2015.

During the nine months ended September 30, 2014 the Company wrote down its Level 3 investment in a longevity fund by an additional \$0.6 million, which reduced its value to \$0. The impact on accumulated other comprehensive loss was \$0.5 million, net of tax. The longevity fund invests in a portfolio of physical life insurance settlements that had been historically valued using the net asset values provided by the fund. Since June 2011, the fund has been closed to all activity. The write down during the nine months ended September 30, 2014 was due, in part, to communication from the longevity fund regarding its continued illiquidity and inactivity. There has been no change in the status of the longevity fund since 2014.

As of September 30, 2015 and December 31, 2014, the Company had an underfunded pension liability of approximately \$4.5 million and \$4.4 million, respectively, included in the other liabilities – non-current line item in the consolidated balance sheets.

12. Leases

The Company has noncancelable operating leases for office and warehouse space expiring at various dates through 2020 and thereafter. Rent expense, which is recorded on a straight-line basis, is estimated to be \$2.2 million for the year ended December 31, 2015. Rent expense was approximately \$0.6 million and \$1.8 million for the three and nine months ended September 30, 2015, respectively. Rent expense was approximately \$0.3 million and \$1.1 million for the three and nine months ended September 30, 2014, respectively.

Future minimum lease payments for operating leases, with initial or remaining terms in excess of one year at September 30, 2015, are as follows:

| | Operating Leases | |
|----------------------------|-----------------------------|---------------|
| | (in thousands) | |
| 2016 | \$ | 1,803 |
| 2017 | | 1,705 |
| 2018 | | 1,688 |
| 2019 | | 1,490 |
| 2020 | | 1,490 |
| Thereafter | | 4,508 |
| Net minimum lease payments | \$ | <u>12,684</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 September 30, 2015, 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 611,369 shares were issued as of September 30, 2015. During the nine months ended September 30, 2015 and 2014, the Company issued 26,181 shares and 31,116 shares, respectively, of the Company's common stock under the ESPP. There were no shares issued under the ESPP during the three months ended September 30, 2015 and 2014.

Third Amended and Restated 2000 Stock Option and Incentive Plan (as amended, the “Third A&R Plan”)

The Second Amendment to the Third A&R Plan (the “Amendment”) was adopted by the Board of Directors on April 3, 2015. Such Amendment was approved by the stockholders at the Company’s 2015 Annual Meeting. Pursuant to the Amendment, the aggregate number of shares authorized for issuance under the Third A&R Plan was increased by 2,500,000 shares to 17,508,929.

Restricted Stock Units with a Market Condition (the “Market Condition RSU’s)

On August 3, 2015, the Compensation Committee of the Board of Directors of the Company approved and granted deferred stock awards of Market Condition RSU’s to members of the Company’s management team under the Third A&R Plan. The vesting of these Market Condition RSU’s is cliff-based and linked to the achievement of a relative total shareholder return of the Company’s common stock from August 3, 2015 to the earlier of (i) August 3, 2018 or (ii) upon a change of control (measured relative to the Russell 3000 index and based on the 20-day trading average price before each such date). As of September 30, 2015, the target number of these restricted stock units that may be earned is 196,782 shares; the maximum amount is 150% of the target number.

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, Market Condition RSU’s and employee stock purchases related to the ESPP.

Stock option and restricted stock unit activity under the Company’s Third A&R Plan for the nine months ended September 30, 2015 was as follows:

| | Stock Options | | Restricted Stock Units | | Market Condition RSU's | |
|-------------------------------|----------------------------------|--|---|------------------------------|---|------------------------------|
| | Stock Options Outstanding | Weighted Average Exercise Price | Restricted Stock Units Outstanding | Grant Date Fair Value | Market Condition RSU's Outstanding | Grant Date Fair Value |
| Balance at December 31, 2014 | 6,263,112 | \$ 3.42 | 306,397 | \$ 4.30 | - | \$ - |
| Granted | 868,000 | 5.51 | 254,685 | 5.56 | 196,785 | 4.81 |
| Exercised | (1,739,134) | 3.04 | - | - | - | - |
| Vested (RSUs) | - | - | (237,188) | - | - | - |
| Cancelled / forfeited | (272,121) | 3.98 | - | - | - | - |
| Balance at September 30, 2015 | <u>5,119,857</u> | \$ 3.87 | <u>323,894</u> | \$ 5.30 | <u>196,785</u> | \$ 4.81 |

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The weighted average fair value of the options granted under the Third A&R Plan during the three months ended September 30, 2015 and 2014 was \$2.14 and \$2.64, respectively. The weighted average fair value of the options granted under the Third A&R Plan during the nine months ended September 30, 2015 and 2014 was \$2.21 and \$2.20, respectively. The following assumptions were used to estimate the fair value, using the Black-Scholes option pricing model, of stock options granted during the three and nine months ended September 30, 2015 and 2014:

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|------------------------------------|-------------------------------------|------------|------------------------------------|------------|
| | 2015 | 2014 | 2015 | 2014 |
| Volatility | 39.47% | 56.96% | 41.07% | 56.83% |
| Risk-free interest rate | 1.76% | 1.90% | 1.72% | 1.79% |
| Expected holding period (in years) | 5.25 years | 5.93 years | 5.52 years | 5.75 years |
| Dividend yield | -% | -% | -% | -% |

The weighted average fair value of the Market Condition RSU's granted under the Third A&R Plan during the three months ended September 30, 2015 was \$4.81. The following assumptions were used to estimate the fair value, using a Monte-Carlo valuation simulation, of the Market Condition RSU's granted during the three months ended September 30, 2015:

| | Three Months Ended September 30, 2015 |
|-------------------------|--|
| Volatility | 35.88% |
| Risk-free interest rate | 0.99% |
| Correlation coefficient | 0.25% |
| Dividend yield | -% |

The Company used historical volatility to calculate the expected volatility for each grant as of the grant date. 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 and Market Condition RSU's. The expected holding period of stock options represents the period of time options are expected to be outstanding and is based on historical experience. The vesting period ranges from one to four years and the contractual life is ten years. The correlation coefficient, used to value the Market Condition RSU's, represents the way in which entities move in relation to the Russell 3000 index as a whole.

Stock-based compensation expense related to stock options, restricted stock units, Market Condition RSU's and the ESPP for the three and nine months ended September 30, 2015 and 2014 was allocated as follows:

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|--------------------------------|-------------------------------------|--------|------------------------------------|----------|
| | 2015 | 2014 | 2015 | 2014 |
| | (in thousands) | | | |
| Cost of revenues | \$ 18 | \$ 36 | \$ 54 | \$ 94 |
| Sales and marketing | 149 | 100 | 343 | 244 |
| General and administrative | 583 | 463 | 1,580 | 1,160 |
| Research and development | 27 | 16 | 72 | 36 |
| Total stock-based compensation | \$ 777 | \$ 615 | \$ 2,049 | \$ 1,534 |

On April 28, 2015, the Company announced the appointment of James Green to its Board of Directors and the retirement of Robert Dishman from its Board of Directors. As part of Dr. Dishman's retirement, the Company (i) awarded an unrestricted stock award to Dr. Dishman on April 28, 2015, having an aggregate cash value of \$80,000, (ii) accelerated the vesting of all outstanding stock options and restricted stock units that were unvested as of April 28, 2015, and (iii) extended the post-retirement option exercise period for each option to the earlier to occur of the respective scheduled expiration date or April 28, 2016. Total compensation expense recognized as part of general and administrative expenses for the nine months ended September 30, 2015, as part of these modifications, was approximately \$0.1 million.

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, restricted stock units and Market Condition RSU's 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 September 30, | | Nine Months Ended September 30, | |
|--|-------------------------------------|------------|------------------------------------|------------|
| | 2015 | 2014 | 2015 | 2014 |
| Basic | 33,933,327 | 32,341,586 | 33,473,958 | 32,079,744 |
| Effect of assumed conversion of employee and director stock options and restricted stock units | - | 1,073,271 | - | 1,017,268 |
| Diluted | 33,933,327 | 33,414,857 | 33,473,958 | 33,097,012 |

Excluded from the shares used in calculating the diluted earnings per common share in the above table are options, restricted stock units and Market Condition RSU's of approximately 5,640,536 and 2,449,873 shares of common stock for the three months ended September 30, 2015 and 2014, respectively, as the impact of these shares would be anti-dilutive. Excluded from the shares used in calculating the diluted earnings per common share in the above table are options, restricted stock units and Market Condition RSU's of approximately 5,640,536 and 2,535,314 shares of common stock for the nine months ended September 30, 2015 and 2014, 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 Revolving Credit Loan Agreement related to a \$20.0 million revolving credit facility with Bank of America, as agent, and Bank of America and Brown Brothers Harriman & Co as lenders (as amended, 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 (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 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, Term Loan and DDTL each have a maturity date of March 29, 2018 (the maturity date of the Revolving Line was extended from March 29, 2016 in connection with the Third Amendment discussed below).

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.

On April 24, 2015, the Company entered into the Third Amendment to the Second Amended and Restated Credit Agreement (the "Third Amendment"). The Third Amendment extended the maturity date of the Revolving Line to March 29, 2018 and reduced the interest rates on the Revolving Line, Term Loan and DDTL. Borrowings under the Term Loan and the DDTL accrued 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 2.75%. Additionally, the Revolving Line accrued 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 2.25%. 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.

On June 30, 2015, the Company entered into the Fourth Amendment to the Second Amended and Restated Credit Agreement (the "Fourth Amendment"), which amended the Company's quarterly minimum fixed charge coverage financial covenant.

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 September 30, 2015 and December 31, 2014, the Company had borrowings of \$20.2 million and \$21.5 million, respectively, outstanding under its Credit Agreement. As of September 30, 2015, the Company was in compliance with all financial covenants contained in the Credit Agreement, was subject to covenant and working capital borrowing restrictions and had available borrowing capacity under its Credit Agreement of \$5.6 million.

As of September 30, 2015, the weighted effective interest rates on the Company's Term Loan, DDTL and Revolving Line borrowings were 3.96%, 3.44% and 2.44%, respectively.

As of September 30, 2015 and December 31, 2014, the Company's borrowings were comprised of:

| | September 30, 2015 | December 31, 2014 |
|----------------------------|-----------------------|----------------------|
| | (in thousands) | |
| Long-term debt: | | |
| Term loan | \$ 7,500 | \$ 9,750 |
| DDTL | 6,000 | 7,500 |
| Revolving line | 6,650 | 4,200 |
| Total debt | 20,150 | 21,450 |
| Less: current installments | (5,000) | (5,000) |
| Long-term debt | <u>\$ 15,150</u> | <u>\$ 16,450</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 notional amount of the Company's derivative instruments as of September 30, 2015 was \$10.5 million. The Term Loan swap contract effectively 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 effectively 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 September 30, 2015 and December 31, 2014.

| | | <u>September 30, 2015</u> Notional Amount | <u>September 30, 2015</u> Fair Value (a) |
|--|-------------------------------------|--|---|
| Derivatives designated as hedging instruments under ASC 815 | | (in thousands) | |
| | Balance sheet classification | | |
| Interest rate swaps | Other liabilities-non current | \$ 10,500 | \$ (56) |
| | | <u>December 31, 2014</u> Notional Amount | <u>December 31, 2014</u> Fair Value (a) |
| Derivatives designated as hedging instruments under ASC 815 | | (in thousands) | |
| | Balance sheet classification | | |
| Interest rate swaps | Other liabilities-non current | \$ 13,500 | \$ (18) |

(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 and their classification within comprehensive loss for the three and nine months ended September 30, 2015 and 2014:

| Derivatives in Hedging Relationships | <u>Amount of gain or (loss) recognized in OCI on derivative (effective portion)</u> | | | |
|--------------------------------------|---|-------------|--------------------------|-------------|
| | <u>Three Months Ended</u> | | <u>Nine Months Ended</u> | |
| | <u>September 30,</u> | | <u>September 30,</u> | |
| | <u>2015</u> | <u>2014</u> | <u>2015</u> | <u>2014</u> |
| | (in thousands) | | | |
| Interest rate swaps | \$ (39) | \$ 23 | \$ (110) | \$ (57) |

The following table summarizes the reclassifications out of accumulated other comprehensive loss for the three and nine months ended September 30, 2015 and 2014:

| Details about AOCI Components | Amount reclassified from AOCI into income (effective portion) | | | | Location of amount reclassified from AOCI into income (effective portion) |
|-------------------------------|---|-------|-------------------|--------|---|
| | Three Months Ended | | Nine Months Ended | | |
| | September 30, | | September 30, | | |
| | 2015 | 2014 | 2015 | 2014 | |
| | (in thousands) | | | | |
| Interest rate swaps | \$ 22 | \$ 31 | \$ 72 | \$ 100 | Interest expense |

As of September 30, 2015, \$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 2015 or 2014.

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 tables present the fair value hierarchy for those liabilities measured at fair value on a recurring basis:

| (In thousands) | Fair Value as of September 30, 2015 | | | |
|-------------------------------|-------------------------------------|---------|---------|-------|
| | Level 1 | Level 2 | Level 3 | Total |
| Liabilities: | | | | |
| Interest rate swap agreements | \$ - | \$ 56 | \$ - | \$ 56 |

| (In thousands) | Fair Value as of December 31, 2014 | | | |
|-------------------------------|------------------------------------|---------|---------|-------|
| | Level 1 | Level 2 | Level 3 | Total |
| Liabilities: | | | | |
| Interest rate swap agreements | \$ - | \$ 18 | \$ - | \$ 18 |

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

Income tax was an approximately \$0.2 million benefit and \$0.3 million expense for the three months ended September 30, 2015 and 2014, respectively. The increased tax benefit for the three months ended September 30, 2015 reflects the incremental benefit recorded for the nine months ended September 30, 2015 associated with actual results for the nine-month period, as described below. The effective income tax rate was 33.8% for the three months ended September 30, 2014. Discrete items included in the tax benefit for the three months ended September 30, 2015 included non-deductible acquisition costs and a return to provision adjustment. Tax expense for the three months ended September 30, 2014 included a discrete item for non-deductible acquisition costs.

Income tax was an approximately \$1.4 million benefit and \$0.9 million expense for the nine months ended September 30, 2015 and 2014, respectively. The effective income tax rate was 42.3% for the nine months ended September 30, 2015, compared with 26.8% for the same period in 2014. The tax benefit for the nine months ended September 30, 2015 was based on the actual results for the nine-month period rather than an effective tax rate estimated for the entire year. The Company continues to utilize a year-to-date approach to provide a better estimate of income tax expense based on its revised 2015 forecast of pre-tax income, mix of income across jurisdictions, as well as the impact of permanent differences on its revised forecast of pre-tax income. The difference between the Company's effective tax rate year over year was primarily attributable to the use of a year-to-date approach at September 30, 2015, the impact of increased research and development tax incentives and incentive stock option exercises on lower pre-tax earnings in 2015 as well as the mix of earnings between its domestic and foreign businesses and a return to provision adjustment, partially offset by non-deductible acquisition costs incurred versus 2014.

18. Subsequent Events

The Company committed to a restructuring plan on October 27, 2015, which includes eliminating certain positions made redundant as a result of its site consolidations, as well as a realignment of our commercial sales team. The restructuring plan is expected to be completed on or before December 31, 2015. In connection with the plan, Harvard Bioscience expects to record a restructuring charge during the fourth quarter of 2015 of approximately \$0.4 million, on a pre-tax basis.

On November 5, 2015, the Company entered into an agreement with its lenders which eliminated the Company's 2015 fourth quarter minimum fixed charge coverage financial covenant requirement. As part of the agreement, the maximum principal amount on the Revolving Line was reduced to \$10.0 million until June 30, 2016, at which time, the maximum principal amount will be restored to \$25.0 million, as long as the Company remains in compliance with all covenants.

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 or 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, 2014, 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

Harvard Bioscience, Inc., a Delaware corporation, is a global developer, manufacturer and marketer of a broad range of scientific instruments, systems and lab consumables used to advance life science for basic research, drug discovery, clinical and environmental testing. Our products are sold to thousands of researchers in over 100 countries through our global sales organization, websites, catalogs, and through distributors including Thermo Fisher Scientific Inc., VWR, and other specialized distributors. We have sales and manufacturing operations in the United States, the United Kingdom, Germany, Sweden, Spain, France, Canada, and China.

From 2009 through November 1, 2013, Harvard Bioscience's operations included two main businesses, the Life Science Research Tools business and the Regenerative Medicine Device business. In 2013, we formed and consummated the spin-off of Harvard Apparatus Regenerative Technology, Inc. ("HART") to our existing shareholders by means of a distribution of the shares we owned in HART.

At the end of 2013 we began a multiple year restructuring program to reduce costs, align global functions, consolidate facilities, and reinvest in key areas such as sales and IT. As part of the reinvestment, we initiated a plan in 2014 to invest in and implement a new global ERP platform. During 2014, as part of the restructuring program, we initiated plans to relocate and consolidate the distribution operations of our Denville Scientific facility to Charlotte, North Carolina and manufacturing operations of our Biochrom facility to our Holliston, MA headquarters. During the first quarter of 2015, we initiated plans to relocate the operations of our Coulbourn Instruments subsidiary to our corporate headquarters. During the second quarter of 2015, we initiated plans to relocate the operations of HEKA Electronics Incorporated, our HEKA Canada subsidiary ("HEKA Canada"), to HEKA Elektronik Dr. Schulze GmbH, our HEKA Germany subsidiary ("HEKA Germany", and together with HEKA Canada, "HEKA"). Additionally, we committed to a restructuring plan on October 27, 2015, which includes eliminating certain positions made redundant as a result of our site consolidations, as well as a realignment of our commercial sales team. The restructuring plan is expected to be completed on or before December 31, 2015. In connection with the plan, we expect to record a restructuring charge during the fourth quarter of 2015 of approximately \$0.4 million, on a pre-tax basis, and expect this plan will save us \$1 million annually starting in 2016. We believe the overall restructuring program positions Harvard Bioscience to stabilize, focus on, and grow the life science business going forward.

During the third quarter of 2015, GE Healthcare informed us of its decision to discontinue the sale of its spectrophotometer products by the end of 2015. This line of products includes the GE brands NanoVue and SimpliNano, which we have been manufacturing. As of January 1, 2016, we will be selling the NanoVue and SimpliNano spectrophotometers through our own direct sales force and through distribution partners, as well as servicing previously sold products in the field, yielding a new source of revenue. As a result of GE's decision, there were lower than expected sales of the GE branded products of approximately \$0.9 million during the third quarter of 2015, and we do not anticipate any sales of this product line to GE Healthcare during the fourth quarter of 2015. We expect the impact in the fourth quarter to be approximately \$1.0 million in lower revenues. We expect to resume revenue from the sale of these spectrophotometers beginning in 2016 and to see benefits from higher margins and potentially from an expanded customer base for many of our other products.

Our Strategy

Our vision 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, while providing exemplary customer service.

To achieve our vision, grow our top-line and bottom-line, and build shareholder value our business strategy is built on four pillars:

- commercial excellence and organic growth;
- new product development;
- acquisitions; and
- operational efficiencies.

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, Spain and China. In those regions where we do not have a direct sales team, we use distributors. Revenues from direct sales to end users represented approximately 67% and 64% of our revenues for the three months ended September 30, 2015 and 2014, respectively. For the nine months ended September 30, 2015 and 2014, revenues from direct sales to end users represented approximately 64% and 59% of our revenues, 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 existing distributors in place from acquired businesses. For the three months ended September 30, 2015 and 2014, approximately 33% and 36% of our revenues, respectively, were derived from sales to distributors. For the nine months ended September 30, 2015 and 2014, approximately 36% and 41% of our revenues, respectively, were derived from sales to distributors.

For the three and nine months ended September 30, 2015, approximately 60% and 61% of our revenues, respectively, were derived from products we manufacture, approximately 12% and 13%, respectively, 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 28% and 26%, respectively, were derived from distributed products sold under our brand names. For the three and nine months ended September 30, 2014, approximately 63% and 64% of our revenues, respectively, were derived from products we manufacture, approximately 9% and 10%, respectively, 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 28% and 26%, respectively, were derived from distributed products sold under our brand names.

For the three months ended September 30, 2015 and 2014, approximately 35% and 39% of our revenues, respectively, were derived from sales made by our non-U.S. operations. For the nine months ended September 30, 2015 and 2014, approximately 40% of our revenues, for both periods, were derived from sales made by our non-U.S. operations.

Changes in the relative proportion of our revenue sources between catalog or website sales, direct sales and distribution sales are primarily the result of a different sales proportion of acquired companies.

Cost of revenues. Cost of revenues includes material, labor and manufacturing overhead costs, obsolescence charges, packaging costs, warranty costs, shipping costs and royalties. Our cost of 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 typically have a higher cost of 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 revenues as a percentage of revenues as compared with the cost of non-manufactured products for the foreseeable future. Additionally, our cost of revenues as a percent of 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 resource 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.

Stock-based compensation expenses. Stock-based compensation expense for the three months ended September 30, 2015 and 2014 was \$0.8 million and \$0.6 million, respectively. Stock-based compensation expense for the nine months ended September 30, 2015 and 2014 was \$2.0 million and \$1.5 million, respectively. The stock-based compensation expense related to stock options, restricted stock units, and the employee stock purchase plan and was recorded as a component of cost of revenues, sales and marketing expenses, general and administrative expenses and research and development expenses.

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

Bookings and Backlog

We monitor bookings and backlog as these are indicators of future revenues and business activity levels.

Bookings were \$27.3 million and \$25.7 million for the three months ended September 30, 2015 and 2014, respectively. Excluding the effects of currency translation, our bookings increased \$2.5 million, or 9.9% quarter over quarter. Bookings were \$81.6 million and \$79.4 million for the nine months ended September 30, 2015 and 2014, respectively. Excluding the effects of currency translation, our bookings increased \$5.3 million, or 6.7% from the same period in the prior year.

Our order backlog was approximately \$8.2 million and \$6.2 million as of September 30, 2015 and 2014, respectively. Excluding the effects of currency translation, our backlog increased \$2.4 million, or 39.3% from the previous year. The increase in backlog was primarily the result of our acquisitions of Multi Channel Systems MCS GmbH ("MCS"), Triangle BioSystems, Inc. ("TBSI") and HEKA and the timing of customer orders and shipments, including delayed shipments to some customers at the end of the third quarter of 2015 from the consolidation of our Biochrom manufacturing operations to our Holliston headquarters. 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.

Selected Results of Operations

Three Months Ended September 30, 2015 compared to Three Months Ended September 30, 2014

| | Three Months Ended September 30, | | Dollar Change | % Change |
|-------------------------------------|-------------------------------------|-----------|------------------|-------------|
| | 2015 | 2014 | | |
| | (dollars in thousands) | | | |
| Revenues | \$ 25,731 | \$ 25,448 | \$ 283 | 1.1% |
| Cost of revenues | 14,005 | 14,006 | (1) | 0.0% |
| Gross margin percentage | 45.6% | 45.0% | N/A | 1.4% |
| Sales and marketing expenses | 5,028 | 4,113 | 915 | 22.2% |
| General and administrative expenses | 5,005 | 4,130 | 875 | 21.2% |
| Research and development expenses | 1,426 | 1,059 | 367 | 34.7% |
| Restructuring charges | 376 | 97 | 279 | 287.6% |
| Amortization of intangible assets | 666 | 618 | 48 | 7.8% |

Each reporting period, we face currency exposure that arises from translating the results of our worldwide operations to the U.S. dollar at exchange rates that fluctuate from the beginning of such period. We evaluate our results of operations on both a reported and a foreign currency-neutral basis, which excludes the impact of fluctuations in foreign currency exchange rates. We believe that disclosing this non-GAAP financial information provides investors with an enhanced understanding of the underlying operations of the business. This non-GAAP financial information approximates information used by our management to internally evaluate our operating results. The non-GAAP financial information provided below should be considered in addition to, not as a substitute for, the financial information provided and presented in accordance with GAAP.

Revenues

Revenues for the three months ended September 30, 2015 were \$25.7 million, an increase of approximately 1.1%, or \$0.3 million compared to revenues of \$25.4 million for the three months ended September 30, 2014. Revenues for the three months ended September 30, 2015 include the acquisitions of MCS, TBSI and HEKA.

Revenues from acquisitions were offset by GE Healthcare discontinuing the sale of its spectrophotometer products, amounting to approximately \$0.9 million in lower revenues in the quarter, and a negative impact of currency translation. Excluding the impact of currency translation, revenues increased approximately 3.9%.

**Reconciliation of Changes In Revenues Compared to the
Same Period of the Prior Year**

| | For the Three Months Ended September 30, 2015 |
|-------------------------|--|
| Growth | 3.9% |
| Foreign exchange effect | -2.8% |
| Net revenue growth | <u>1.1%</u> |

Cost of revenues

Cost of revenues were \$14.0 million for both the three months ended September 30, 2015 and 2014. Gross profit margin as a percentage of revenues increased to 45.6% for the three months ended September 30, 2015 compared with 45.0% for the same quarter in 2014. The increase in gross profit margin was due primarily to higher revenues and the contributions from MCS, TBSI and HEKA, partially offset by unfavorable currency translation and costs to relocate and consolidate certain facilities.

Sales and marketing expenses

Sales and marketing expenses increased \$0.9 million, or 22.2%, to \$5.0 million for the three months ended September 30, 2015 compared with \$4.1 million for the three months ended September 30, 2014. The increase was primarily due to our acquisitions and higher payroll related costs, partially offset by favorable currency translation.

General and administrative expenses

General and administrative expenses were \$5.0 million for the three months ended September 30, 2015, an increase of \$0.9 million, or 21.2%, compared with \$4.1 million for the three months ended September 30, 2014. The increase was primarily due to our acquisitions, costs to relocate and consolidate certain facilities and higher stock compensation expense, partially offset by lower unpaid incentive bonus costs and favorable currency translation.

Research and development expenses

Research and development expenses were \$1.4 million for the three months ended September 30, 2015, an increase of \$0.3 million, or 34.7%, compared with \$1.1 million for the three months ended September 30, 2014. The increase was primarily due to our acquisitions, partially offset by lower unpaid incentive bonus costs and favorable currency translation.

Restructuring

Restructuring charges were \$0.4 million for three months ended September 30, 2015 compared with \$97,000 for the three months ended September 30, 2014. Restructuring charges during the three months ended September 30, 2014 included additional charges 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%.

Restructuring charges recorded during the three months ended September 30, 2015 related to plans commenced during the fourth quarter of 2014 and the nine months ended September 30, 2015. The 2014 restructuring plan realigned global operations and included actions to move the Biochrom manufacturing and Denville Scientific distribution operations to Holliston, MA and Charlotte, NC, respectively. The 2015 restructuring plans included actions to move the Coulbourn Instruments' operations to Holliston, MA and the HEKA Canada operations to HEKA Germany.

Amortization of intangible assets

Amortization of intangible asset expenses was \$0.7 million for the three months ended September 30, 2015 compared with \$0.6 million for the three months ended September 30, 2014.

Other expense, net

Other expense, net, was \$0.3 million and \$0.5 million for the three months ended September 30, 2015 and 2014, respectively. Included in both periods was interest expense of \$0.2 million. The decrease in other expense, net was primarily due to \$0.2 million in acquisition related costs incurred during the three months ended September 30, 2015 compared to \$0.3 million for the three months ended September 30, 2014, as well as currency exchange rate fluctuations. Currency exchange rate fluctuations included as a component of net (loss) income resulted in approximately \$70,000 in currency gains during the three months ended September 30, 2015, compared to \$0 during the three months ended September 30, 2014.

Income taxes

Income tax was an approximately \$0.2 million benefit and \$0.3 million expense for the three months ended September 30, 2015 and 2014, respectively. The increased tax benefit for the three months ended September 30, 2015 reflects the incremental benefit recorded for the nine months ended September 30, 2015 associated with actual results for the nine-month period. Refer to the selected results of operations for the nine months ended September 30, 2015 for further details. The effective income tax rate was 33.8% for the three months ended September 30, 2014. Discrete items included in the tax benefit for the three months ended September 30, 2015 included non-deductible acquisition costs and a return to provision adjustment. Tax expense for the three months ended September 30, 2014 included a discrete item for non-deductible acquisition costs.

Nine Months Ended September 30, 2015 compared to Nine Months Ended September 30, 2014

| | Nine Months Ended September 30, | | Dollar Change | % Change |
|-------------------------------------|--|-------------|--------------------------|---------------------|
| | 2015 | 2014 | | |
| | (dollars in thousands) | | | |
| Revenues | \$ 80,294 | \$ 78,299 | \$ 1,995 | 2.5% |
| Cost of product revenues | 44,495 | 42,818 | 1,677 | 3.9% |
| Gross margin percentage | 44.6% | 45.3% | N/A | -1.6% |
| Sales and marketing expenses | 15,355 | 13,102 | 2,253 | 17.2% |
| General and administrative expenses | 14,758 | 12,378 | 2,380 | 19.2% |
| Research and development expenses | 4,888 | 3,316 | 1,572 | 47.4% |
| Restructuring charges | 487 | 349 | 138 | 39.5% |
| Amortization of intangible assets | 2,137 | 1,839 | 298 | 16.2% |

Each reporting period, we face currency exposure that arises from translating the results of our worldwide operations to the U.S. dollar at exchange rates that fluctuate from the beginning of such period. We evaluate our results of operations on both a reported and a foreign currency-neutral basis, which excludes the impact of fluctuations in foreign currency exchange rates. We believe that disclosing this non-GAAP financial information provides investors with an enhanced understanding of the underlying operations of the business. This non-GAAP financial information approximates information used by our management to internally evaluate our operating results. The non-GAAP financial information provided below should be considered in addition to, not as a substitute for, the financial information provided and presented in accordance with GAAP.

Revenues

Revenues for the nine months ended September 30, 2015 were \$80.3 million, an increase of approximately 2.5%, or \$2.0 million compared to revenues of \$78.3 million for the nine months ended September 30, 2014. Revenues for the nine months ended September 30, 2015 include the acquisitions of MCS, TBSI and HEKA.

Revenues from acquisitions were offset by GE Healthcare discontinuing the sale of its spectrophotometer products, amounting to approximately \$0.9 million in lower revenues, and a negative impact of currency translation. Excluding the impact of currency translation, revenues increased approximately 6.4%.

**Reconciliation of Changes In Revenues Compared to the
Same Period of the Prior Year**

| | For the Nine Months Ended September 30, 2015 |
|-------------------------|---|
| Growth | 6.4% |
| Foreign exchange effect | -3.9% |
| Net revenue growth | <u>2.5%</u> |

Cost of revenues

Cost of revenues increased \$1.7 million, or 3.9%, to \$44.5 million for the nine months ended September 30, 2015 compared with \$42.8 million for the nine months ended September 30, 2014. Gross profit margin as a percentage of revenues decreased to 44.6% for the nine months ended September 30, 2015 compared with 45.3% for the same period in 2014. The decrease in gross profit margin was due primarily to purchase accounting charges related to the fair value step-up of inventory upon acquisition, costs to relocate and consolidate certain facilities and unfavorable currency translation, partially offset by higher revenues and the contributions from MCS, TBSI and HEKA.

Sales and marketing expenses

Sales and marketing expenses increased \$2.3 million, or 17.2%, to \$15.4 million for the nine months ended September 30, 2015 compared with \$13.1 million for the nine months ended September 30, 2014. The increase was primarily due to our acquisitions and higher payroll related costs, partially offset by favorable currency translation.

General and administrative expenses

General and administrative expenses were \$14.8 million for the nine months ended September 30, 2015, an increase of \$2.4 million, or 19.2%, compared with \$12.4 million for the nine months ended September 30, 2014. The increase was primarily due to our acquisitions, costs to relocate and consolidate certain facilities and higher stock compensation expense, partially offset by lower unpaid incentive bonus costs and favorable currency translation.

Research and development expenses

Research and development expenses were \$4.9 million for the nine months ended September 30, 2015, an increase of \$1.6 million, or 47.4%, compared with \$3.3 million for the nine months ended September 30, 2014. The increase was primarily due to our acquisitions, partially offset by lower unpaid incentive bonus costs and favorable currency translation.

Restructuring

Restructuring charges were \$0.5 million for nine months ended September 30, 2015 compared with \$0.3 million for the nine months ended September 30, 2014. Restructuring charges during the nine months ended September 30, 2014 included additional charges 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%.

Restructuring charges recorded during the nine months ended September 30, 2015 related to plans commenced during the fourth quarter of 2014 and the nine months ended September 30, 2015. The 2014 restructuring plan realigned global operations and included actions to move the Biochrom manufacturing and Denville Scientific distribution operations to Holliston, MA and Charlotte, NC, respectively. The 2015 restructuring plans included actions to move the Coulbourn Instruments' operations to Holliston, MA and the HEKA Canada operations to HEKA Germany.

Amortization of intangible assets

Amortization of intangible asset expenses was \$2.1 million for the nine months ended September 30, 2015 compared with \$1.8 million for the nine months ended September 30, 2014.

Other expense, net

Other expense, net, was \$1.5 million and \$1.3 million for the nine months ended September 30, 2015 and 2014, respectively. Interest expense was \$0.6 million for the nine months ended September 30, 2015 compared to \$0.8 million for the nine months ended September 30, 2014. The increase in other expense, net was primarily due to \$0.9 million in acquisition related costs incurred during the nine months ended September 30, 2015 compared to \$0.4 million for the nine months ended September 30, 2014, partially offset by currency exchange rate fluctuations. Currency exchange rate fluctuations included as a component of net (loss) income resulted in approximately \$0.2 million in currency gains during the nine months ended September 30, 2015, compared to \$0.1 million in foreign currency losses during the nine months ended September 30, 2014.

Income taxes

Income tax was an approximately \$1.4 million benefit and \$0.9 million expense for the nine months ended September 30, 2015 and 2014, respectively. The effective income tax rate was 42.3% for the nine months ended September 30, 2015, compared with 26.8% for the same period in 2014. The tax benefit for the nine months ended September 30, 2015 was based on the actual results for the nine-month period rather than an effective tax rate estimated for the entire year. We continue to utilize a year-to-date approach to provide a better estimate of income tax expense based on our revised 2015 forecast of pre-tax income, mix of income across jurisdictions, as well as the impact of permanent differences on our revised forecast of pre-tax income. The difference between our effective tax rate year over year was primarily attributable to the use of a year-to-date approach at September 30, 2015, the impact of increased research and development tax incentives and incentive stock option exercises on lower pre-tax earnings in 2015 as well as the mix of earnings between its domestic and foreign businesses and a return to provision adjustment, partially offset by non-deductible acquisition costs incurred versus 2014.

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. As previously discussed, on October 1, 2014, we acquired all of the issued and outstanding shares of two life science companies, MCS and TBSI, for approximately \$12.7 million, net of cash acquired. We funded the acquisitions of MCS and TBSI from our existing cash balances and borrowings under our credit facility, respectively. Additionally, on January 8, 2015, we acquired all of the issued and outstanding shares of HEKA for approximately \$4.5 million, net of cash acquired. We funded the acquisition from our existing cash balances.

As of September 30, 2015, we held cash and cash equivalents of \$6.1 million, compared with \$14.1 million at December 31, 2014. As of September 30, 2015 and December 31, 2014, we had \$20.2 million and \$21.5 million, respectively, of borrowings outstanding under our credit facility. Total debt, net of cash and cash equivalents was \$14.1 million at September 30, 2015, compared to \$7.3 million at December 31, 2014. In addition, we had an underfunded U.K. pension liability of approximately \$4.5 million and \$4.4 million at September 30, 2015 and December 31, 2014, respectively.

As of September 30, 2015 and December 31, 2014, cash and cash equivalents held by our foreign subsidiaries was \$5.0 million and \$12.7 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, pension obligations and operations. It is impracticable to estimate the total tax liability, if any, which would be created by the future distribution of these earnings. In January 2015, we acquired all the issued and outstanding shares of HEKA, and utilized approximately \$5.9 million of our foreign cash on hand.

Condensed Cash Flow Statements
(unaudited)

| | Nine Months Ended September 30, | |
|---|--|---------------|
| | 2015 | 2014 |
| | (in thousands) | |
| Cash flows from operations: | | |
| Net (loss) income | \$ (1,899) | \$ 2,374 |
| Changes in assets and liabilities | (3,494) | (3,768) |
| Other adjustments to operating cash flows | 4,334 | 4,482 |
| Net cash (used in) provided by operating activities | (1,059) | 3,088 |
| Investing activities: | | |
| Additions to property, plant and equipment | (2,298) | (1,224) |
| Acquisitions, net of cash acquired | (4,545) | - |
| Other investing activities | 6 | 76 |
| Net cash used in investing activities | (6,837) | (1,148) |
| Financing activities: | | |
| Net repayments of debt | (1,300) | (1,550) |
| Net proceeds from issuance of common stock | 1,953 | 1,415 |
| Other financing activities | (32) | - |
| Net cash provided by (used in) financing activities | 621 | (135) |
| Effect of exchange rate changes on cash | (769) | (842) |
| (Decrease) increase in cash and cash equivalents | <u>\$ (8,044)</u> | <u>\$ 963</u> |

Our operating activities used cash of \$1.1 million for the nine months ended September 30, 2015, compared with cash provided by operating activities of \$3.1 million for the nine months ended September 30, 2014. The decrease in cash flows from operations was primarily due to lower net income year over year. Our cash flows from operations for the nine months ended September 30, 2015 was also impacted by higher temporary inventory requirements necessary to relocate and consolidate certain of our distribution and manufacturing facilities, including our Denville distribution business from New Jersey to North Carolina, the consolidation of our UK manufacturing operations and Coulbourn Instruments' operations with our Holliston, MA facility, and the consolidation of our HEKA Canada facility with our HEKA Germany facility.

Our investing activities used cash of \$6.8 million during the nine months ended September 30, 2015, compared to \$1.1 million for the nine months ended September 30, 2014. Investing activities during the nine months ended September 30, 2015 included cash used for acquisitions net of cash acquired, purchases of property, plant and equipment, and proceeds from the sale of property, plant and equipment. Investing activities during the nine months ended September 30, 2014 included purchases of property, plant and equipment and proceeds from the sale of property, plant and equipment. In January 2015, we acquired HEKA for approximately \$4.5 million, net of cash acquired. We spent \$2.3 million and \$1.2 million on capital expenditures during the nine months ended September 30, 2015 and 2014, respectively. The increase in capital expenditures year over year was due to the year-to-date investment in implementing a new enterprise resource planning ("ERP") platform, as well as capital spend to relocate our Denville distribution business and UK manufacturing operations to North Carolina and Holliston, MA, respectively.

Our financing activities have historically consisted of borrowings and repayments under our revolving credit facility and term loans, payments of debt issuance costs and the issuance of common stock. During the nine months ended September 30, 2015, financing activities provided cash of \$0.6 million, compared with \$0.1 million of cash used by financing activities for the nine months ended September 30, 2014. During the nine months ended September 30, 2015, we borrowed \$4.8 million under our credit facility, repaid \$6.1 million of debt under our credit facility and term loans and ended the quarter with \$20.2 million of borrowings. Net proceeds from the issuance of common stock for the nine months ended September 30, 2015 was \$2.0 million, which related to the exercise of stock options. During the nine months ended September 30, 2014, we borrowed \$2.2 million under our credit facility, repaid \$3.8 million of debt under our credit facility and term loans and ended the quarter with \$23.2 million of borrowings. Net proceeds from the issuance of common stock for the nine months ended September 30, 2014 was \$1.4 million, which related to the exercise of stock options.

Borrowing Arrangements

On August 7, 2009, we entered into an Amended and Restated Revolving Credit Loan Agreement related to a \$20.0 million revolving credit facility with Bank of America, as agent, and Bank of America and Brown Brothers Harriman & Co as lenders (as amended, 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, Term Loan and DDTL each have a maturity date of March 29, 2018 (the maturity date of the Revolving Line was extended from March 29, 2016 in connection with the Third Amendment discussed below).

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.

On April 24, 2015, we entered into the Third Amendment to the Second Amended and Restated Credit Agreement (the “Third Amendment”), which extended the maturity date of the Revolving Line to March 29, 2018 and reduced the interest rates on the Revolving Line, Term Loan and DDTL. Borrowings under the Term Loan and the DDTL accrued 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 2.75%. Prior to the Third Amendment, the Revolving Line accrued 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 2.25%. 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.

On June 30, 2015, we entered into the Fourth Amendment to the Second Amended and Restated Credit Agreement (the “Fourth Amendment”), which amended our quarterly minimum fixed charge coverage financial covenant.

At September 30, 2015, the weighted effective interest rates on the Term Loan, DDTL and Revolving Line borrowings were 3.96%, 3.44% and 2.44%, 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 September 30, 2015, we were in compliance with all financial covenants contained in the Credit Agreement; we were subject to covenant and working capital borrowing restrictions, and had available borrowing capacity under the Credit Agreement of \$5.6 million.

On November 5, 2015, we entered into an agreement with our lenders which eliminated our 2015 fourth quarter minimum fixed charge coverage financial covenant requirement. As part of the agreement, the maximum principal amount on the Revolving Line was reduced to \$10.0 million until June 30, 2016, at which time, the maximum principal amount will be restored to \$25.0 million, as long as we remain in compliance with all covenants.

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, any potential future acquisitions and capital expenditures for the next 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 guarantee 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, 2014, which was filed with the SEC on March 12, 2015.

Impact of Foreign Currencies

Our international operations in some instances operate in a natural hedge as we sell our products in many countries and a substantial portion of our revenues, costs and expenses are denominated in foreign currencies, especially the British pound sterling, the Euro, the Canadian dollar and the Swedish krona.

For the nine months ended September 30, 2015, the U.S dollar's strengthening in relation to those currencies resulted in an unfavorable translation effect on our consolidated revenues and on our consolidated net loss. Changes in foreign currency exchange rates resulted in an unfavorable effect on revenues of approximately \$3.1 million and a favorable effect on expenses of approximately \$2.8 million. Conversely, changes in foreign currency exchange rates resulted in a favorable effect on revenues of approximately \$1.5 million and an unfavorable effect on expenses of approximately \$1.3 million for the nine months ended September 30, 2014 as compared to the same period of 2013.

The loss associated with the translation of foreign equity into U.S. dollars included as a component of comprehensive loss, was approximately \$0.5 million and \$3.3 million for the three and nine months ended September 30, 2015, respectively, compared to losses of \$3.2 million and \$2.6 million for the three and nine months ended September 30, 2014, respectively.

In addition, currency exchange rate fluctuations included as a component of net (loss) income resulted in approximately \$70,000 and \$159,000 in currency gains during the three and nine months ended September 30, 2015, respectively, compared to \$0 and \$148,000 in foreign currency losses during the three and nine months ended September 30, 2014, respectively.

Recently Issued Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2014-09, "*Revenue from Contracts with Customers*," a new accounting standard that provides for a comprehensive model to use in the accounting for revenue arising from contracts with customers that will replace most existing revenue recognition guidance in U.S. GAAP. Under this standard, revenue will be recognized to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which we expect to be entitled in exchange for those goods or services. At its July 2015 meeting, the FASB agreed to defer the mandatory effective date of ASU 2014-09 one year. Under the one year deferral, the standard will take effect in 2018 for calendar year-end public entities. We are assessing the new standard and have not yet determined the impact to our consolidated financial statements.

In April 2015, the FASB issued ASU 2015-03, *Interest - Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs*. The update requires debt issuance costs related to a recognized debt liability to be presented in the balance sheet as a direct deduction from the carrying amount of the related debt liability, instead of being presented as an asset. Debt disclosures will include the face amount of the debt liability and the effective interest rate. The update requires retrospective application and represents a change in accounting principle. The update is effective for fiscal years beginning after December 15, 2015. Early adoption is permitted for financial statements that have not been previously issued. We are evaluating the impact of ASU 2015-03 on our consolidated financial statements and the possibility of early adoption thereof.

In July 2015, the FASB issued ASU 2015-11, *Simplifying Measurement of Inventory*. The update requires measurement of most inventory "at the lower of cost and net realizable value", and applies to all entities that recognize inventory within the scope of ASC 330, except for inventory measured under the last-in, first-out (LIFO) method or the retail inventory method (RIM). ASU 2015-11 requires prospective application and represents a change in accounting principle. The update is effective for fiscal years beginning after December 15, 2016. Early adoption is permitted for financial statements that have not been previously issued. We are evaluating the impact of ASU 2015-11 on our consolidated financial statements and the possibility of early adoption thereof.

In September 2015, the FASB issued ASU 2015-16, *Simplifying the Accounting for Measurement-Period Adjustments*. The update eliminates the requirement to retrospectively adjust financial statements for measurement-period adjustments that occur in periods after a business combination. Under the update, measurement-period adjustments are to be calculated as if they were known at the acquisition date, but are recognized in the reporting period in which they are determined. Additional disclosures are required about the impact on current-period earnings. ASU 2015-16 requires prospective application to adjustments of provisional amounts that occur after the effective date. The update is effective for fiscal years beginning after December 15, 2016. Early adoption is permitted for financial statements that have not been previously issued. We are evaluating the impact of ASU 2015-16 on our consolidated financial statements and the possibility of early adoption thereof.

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, 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 September 30, 2015, we had \$20.2 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.

Prior to the Third Amendment, borrowings under the Term Loan and the DDTL accrued 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%. Prior to the Third Amendment, the Revolving Line accrued 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 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 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 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 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%. The notional amount of our derivative instruments as of September 30, 2015 was \$10.5 million. These swap contracts were associated with reducing or eliminating interest rate risk and were designated as cash flow hedge instruments in accordance with ASC 815. 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.

On April 24, 2015, we entered the Third Amendment which extended the maturity date of the Revolving Line to March 29, 2018 and reduced the interest rate to the London Interbank Offered Rate plus 2.25%, 2.75% and 2.75% on the Revolving Line, Term Loan and DDTL, respectively.

As of September 30, 2015, the weighted effective interest rates on our Term Loan, DDTL and Revolving Line borrowings were 3.96%, 3.44% and 2.44%, 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 September 30, 2015 over the next twelve months is quantified and summarized as follows:

| If compared to the rate as of September 30, 2015 | Interest expense increase | |
|--|------------------------------|-----|
| | (in thousands) | |
| Interest rates increase by 1% | \$ | 97 |
| Interest rates increase by 2% | \$ | 193 |

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 September 30, 2015. 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 nine months ended September 30, 2015 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. During nine months ended September 30, 2015, we launched the first live phase of our Enterprise Resource Planning, or ERP, system implementation. In subsequent periods, the remaining phases of the ERP system implementation will be launched. While the implementation automated certain manual internal controls, it did not materially affect our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1A. *Risk Factors.*

To our knowledge, and except to the extent additional factual information disclosed in this Quarterly Report on Form 10-Q relates to such risk factors, there has been no material changes in the risk factors described in "Item 1A. Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2014, which was filed with the SEC on March 12, 2015.

Item 6. Exhibits

| Exhibit Index | |
|--------------------------|--|
| 10.1 | Form of Performance Based Deferred Stock Award Agreement |
| 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 |

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

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by undersigned thereunto duly authorized.

Date: November 5, 2015

HARVARD BIOSCIENCE, INC.

By: /S/ JEFFREY A. DUCHEMIN
Jeffrey A. Duchemin
Chief Executive Officer

By: /S/ ROBERT E. GAGNON
Robert E. Gagnon
Chief Financial Officer

INDEX TO EXHIBITS

| | |
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**DEFERRED STOCK AWARD AGREEMENT
UNDER THE HARVARD BIOSCIENCE, INC. THIRD AMENDED AND RESTATED 2000
STOCK OPTION AND INCENTIVE PLAN, AS AMENDED**

Name of Grantee: _____

Grant Date: _____

Pursuant to the Harvard Bioscience, Inc. Third Amended and Restated 2000 Stock Option and Incentive Plan, as amended through the date hereof (the "**Plan**"), Harvard Bioscience, Inc. (the "**Company**") hereby grants a number of Restricted Stock Units ("**RSUs**") to be determined in accordance herewith to the Grantee named above (the "**Award**"), subject to the terms of the Plan and this Deferred Stock Award Agreement (the "**Agreement**"). The Award represents a promise to pay to the Grantee certain shares of Common Stock, par value \$0.01 per share (the "**Stock**") of the Company in an amount determined based on the attainment of performance goals related to total shareholder return ("**TSR**") and continued employment, subject to the restrictions and conditions set forth herein and in the Plan.

1. Grant and Restrictions.

(a) Grant. The Company hereby awards to the Grantee a target award of _____ RSUs (hereinafter, as adjusted in accordance with Section 7, the "**Target Award**"), subject to the vesting and other conditions set forth herein and in the Plan, with the final amount of the Award to be the Final RSUs as determined in accordance with Section 2 below.

(b) No Voting Rights and Dividends. Until such time as the RSUs are paid to the Grantee in shares of Stock, the Grantee shall have no voting rights and no rights to any dividends or other distributions with respect to the RSUs.

(c) Restrictions on Transfer. The RSUs granted pursuant to this Agreement may not be sold, assigned, transferred, pledged or otherwise encumbered or disposed of prior to vesting.

2. Vesting of Restricted Stock Units.

(a) General Vesting Terms. Except as set forth in Paragraphs 2(b) and 2(c) below, the Grantee shall vest in a number of RSUs (the "**Final RSUs**") based on the attainment of the TSR performance goals described on Schedule A as of the end of the Performance Period (as defined below), provided that the Grantee remains employed by the Company or any Subsidiaries through _____ (the "**Vesting Date**"). The Performance Period is the period beginning on _____ and ending on _____ (the "**Performance Period**"). Your Final RSUs will be determined by multiplying the Target Award by the percentage (from zero to ____%) (the "**Performance Factor**") which is based on the Company's Total Shareholder Return during the Performance Period compared to the companies in the _____, determined according to Schedule A of this Agreement. Except as specifically provided below in this Section 2, no RSUs will vest for any reason prior to the Vesting Date. Except as provided in Paragraphs 2(b) and 2(c) below, if the TSR performance goals are not attained at the end of the Performance Period, the RSUs will be immediately forfeited. Upon vesting in accordance herewith or Paragraph 2(c), the restrictions and conditions in Paragraph 1 of this Agreement with respect to such RSU shall lapse and such RSU shall become payable to the Grantee in shares of Stock on the relevant vesting date in the amount of the vested RSUs in accordance with Schedule A. Any fractional RSU resulting from the vesting of the RSUs in accordance with this Agreement shall be rounded down to the nearest whole number.

(b) Except as noted in Paragraph 2(c) below, and notwithstanding any provision of any other agreement or arrangement between the Grantee and the Company that provides accelerated vesting of RSUs or all equity awards in general in the event of certain types of termination, the Grantee's rights to all RSUs granted herein and not yet vested in accordance with the provisions of Paragraphs 2(a) or 2(c), and Schedule A, shall automatically terminate upon the Grantee's termination of employment, voluntarily or involuntarily, with the Company and its Subsidiaries for any reason (including death).

(c) Notwithstanding anything to the contrary in this Agreement, if a Change of Control occurs during the Performance Period, the date of such Change of Control shall be deemed the Vesting Date, and the Performance Factor will be calculated as if the date of the Change of Control is the last day of the Performance Period. In such event, your Final RSUs will be determined by multiplying the Target Award by the calculated Performance Factor.

3. Receipt of Stock Upon Vesting. Upon the vesting of the RSUs as provided in Paragraph 2, the Grantee shall receive one share of Stock for each RSU vested. Shares of Stock acquired pursuant to this Award shall be issued and delivered to the Grantee either in actual stock certificates or by electronic book entry, subject to tax withholding as provided in Paragraph 6 below.

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

5. Transferability. This Agreement is personal to the Grantee, is non-assignable and is not transferable in any manner, by operation of law or otherwise, other than by will or the laws of descent and distribution.

6. Tax Withholding. Unless the Grantee elects to satisfy the tax withholding obligation in a timely manner by making the payments or related arrangements in accordance with Section 14(a) of the Plan (including, without limitation, payments made from such Grantee's compensation or other cash payments otherwise due him or her from the Company or by paying the Company directly by a separate check), the tax withholding obligation shall be satisfied by the Company withholding, from shares of Stock to be issued to the Grantee hereunder, such number of the Grantee's shares having an aggregate fair market value equal to the required minimum amount of the tax withholding then due with respect to such Grantee.

7. No Obligation to Continue Employment. Neither the Company nor any Subsidiary is obligated by or as a result of the Plan or this Agreement to continue the Grantee in employment and neither the Plan nor this Agreement shall interfere in any way with the right of the Company or any Subsidiary to terminate the employment of the Grantee at any time.

8. Certain Corporate Changes. If any change is made to the Common Stock (whether by reason of merger, consolidation, reorganization, recapitalization, stock dividend, stock split, combination of shares, or exchange of shares or any other change in capital structure made without receipt of consideration), then unless such event or change results in the termination of all the RSUs granted under this Agreement, the Administrator shall adjust, as provided in the Plan, the number and class of shares underlying the RSUs held by the Grantee, the maximum number of shares for which the RSUs may vest, and the share price or class of Common Stock for purposes of the TSR performance goals, as appropriate, to reflect the effect of such event or change in the Company's capital structure in such a way as to preserve the value of the RSUs. Any adjustment that occurs under the terms of this Section 9 or the Plan will not change the timing or form of payment with respect to any RSUs except in accordance with section 409A of the Code.

9. Notices. Notices hereunder shall be mailed or delivered to the Company at its principal place of business and shall be mailed or delivered to the Grantee at the address on file with the Company or, in either case, at such other address as one party may subsequently furnish to the other party in writing.

HARVARD BIOSCIENCE, INC.

By: _____

Name:

Title:

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

Dated:

Grantee's Signature

Grantee's name and address:

Schedule A
Determination of Performance Factor

The Performance Factor shall be determined according to the following table:

| Relative TSR Percentile Rank* | Performance Factor** |
|---|---|
| __ th percentile or lower | 0% |
| __ th percentile | __% |
| __ th to __ ^h percentile | __%, plus for each __ percentile above __ th percentile, an additional __% |
| __ th percentile | __% |
| __ st to __ th percentile | __%, plus for each __ percentile above __ th percentile, an additional __% |
| __ th percentile or higher | __% |

Examples: If the Company's Relative TSR Percentile Rank falls into the __rd percentile (i.e., __ percentiles above the __th percentile), the Performance Factor will be __% (calculated by multiplying __ by __% and adding it to __%). If the Company's Relative TSR Percentile Rank falls into the __th percentile (i.e., __ percentiles above the __th percentile), the Performance Factor will be __% (calculated by multiplying __ by __% and adding it to __%), provided that if the Total Shareholder Return for the Company is negative, the Performance Factor in such instance would be __%.

*Total Shareholder Return for the Company shall be based on the percentage increase/decrease from the Initial Price to the Final Price, and shall reflect the reinvestment of dividends paid (if any) to shareholders of Common Stock during the Measurement Period.

** If the Total Shareholder Return is negative for the Performance Period, the Performance Factor is subject to a cap of __%.

For purposes of the foregoing calculation:

1. **“Total Shareholder Return”** mean the quotient (expressed as a percentage) obtained by dividing (i)(A) the Final Price, plus (B) the aggregate amount of dividends paid in respect of a share of Common Stock during the Measurement Period (assuming reinvestment of the dividends), minus (C) the Initial Price, by (ii) the Initial Price.
2. **“Initial Price”** means the average closing price of Common Stock over the twenty trading day period ending on the trading day immediately preceding the first day of the Performance Period.
3. **“Final Price”** means the average closing price of Common Stock over the twenty trading day period ending on the last day of the Measurement Period.
4. **“Measurement Period”** means the Performance Period; provided that in the event of a Change of Control, Total Shareholder Return shall be calculated through the date of the Change of Control as provided in the Agreement.
5. **“Relative TSR Percentile Rank”** means the percentile within the _____ (as defined below) that the Company's Total Shareholder Return would have for the Measurement Period.

6. If the Company's Relative TSR Percentile Rank falls between the measuring points, the Company's Relative TSR Percentile Rank will be rounded to the nearest whole percentage point. With respect to the _____, such Initial Price and Final Price shall be determined on a component basis (assuming dividend reinvestment) during the applicable twenty (20) trading day periods using an open approach).

7. The companies included in the _____ for purposes of the Relative TSR Percentile Rank calculation (the "**Constituent Companies**") will be determined on the first day of the Measurement Period and will be changed only in accordance with the following and no company shall be added during the Measurement Period for purposes of the Relative TSR Percentile Rank calculation. The _____ Constituent Companies for purposes of the Relative TSR Percentile Rank calculation will be subject to change as follows:

(i) In the event of a merger, acquisition or business combination transaction of a company in the _____ Constituent Companies in which the company in the _____ Constituent Companies is the surviving entity and remains publicly traded, the surviving entity shall remain a company in the _____ Constituent Companies. Any entity involved in the transaction that is not the surviving company shall no longer be a company in the _____ Constituent Companies.

(ii) In the event of a merger, acquisition or business combination transaction of a company in the _____ Constituent Companies, a "going private" transaction or other event involving a company in the _____ Constituent Companies or the liquidation of a company in the _____ Constituent Companies, in each case where the company in the _____ Constituent Companies is not the surviving entity or is no longer publicly traded, the company shall no longer be a company in the _____ Constituent Companies.

(iii) Notwithstanding the foregoing, in the event of a bankruptcy of a company in the _____ Constituent Companies where the company in the _____ Constituent Companies is not publicly traded at the end of the Measurement Period, such company shall remain a company in the _____ Constituent Companies but shall be deemed to have a Total Shareholder Return of negative __% (-__%).

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: November 5, 2015

/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: November 5, 2015

/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 September 30, 2015 (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: November 5, 2015

/s/ ROBERT E. GAGNON _____

Robert E. Gagnon
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 September 30, 2015 (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: November 5, 2015

/s/ JEFFREY A. DUCHEMIN

Jeffrey A. Duchemin
Chief Executive Officer