

HARVARD BIOSCIENCE INC  
Form 10-Q  
May 07, 2015

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, DC 20549

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FORM 10-Q

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

For the quarterly period ended March 31, 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

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

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Delaware  
(State or Other Jurisdiction of  
Incorporation or Organization)

04-3306140  
(IRS Employer  
Identification No.)

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

01746  
(Zip Code)

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

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.  YES  
 NO

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).  YES  NO

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

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

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

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

As of May 1, 2015, there were 33,452,456 shares of common stock, par value \$0.01 per share, outstanding.

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FORM 10-Q  
For the Quarter Ended March 31, 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)

|  | March 31,<br>2015 | December<br>31,<br>2014 |
|--|-------------------|-------------------------|
| <b>Assets</b>  |                   |                         |
| Current assets:  |                   |                         |
| Cash and cash equivalents  | \$8,031           | \$14,134                |
| Accounts receivable, net of allowance for doubtful accounts of \$308 and \$328, respectively | 16,023            | 16,141                  |
| Inventories  | 22,092            | 20,531                  |
| Deferred income tax assets - current   | 1,855             | 1,515                   |
| Other receivables and other assets   | 4,770             | 4,742                   |
| Total current assets   | 52,771            | 57,063                  |
| Property, plant and equipment, net   | 5,581             | 5,190                   |
| Deferred income tax assets - non-current   | 10,946            | 11,056                  |
| Amortizable intangible assets, net   | 22,911            | 21,153                  |
| Goodwill   | 40,339            | 39,822                  |
| Other indefinite lived intangible assets   | 1,222             | 1,252                   |
| Other assets   | 352               | 380                     |
| Total assets   | \$134,122         | \$135,916               |
| <b>Liabilities and Stockholders' Equity</b>  |                   |                         |
| Current liabilities:   |                   |                         |
| Current portion, long-term debt  | \$5,000           | \$5,000                 |
| Accounts payable   | 7,180             | 6,294                   |
| Deferred revenue   | 980               | 655                     |
| Accrued income taxes   | 291               | 554                     |
| Accrued expenses   | 4,272             | 4,452                   |
| Deferred income tax liabilities - current  | 239               | 121                     |
| Other liabilities - current  | 1,800             | 1,023                   |
| Total current liabilities  | 19,762            | 18,099                  |
| Long-term debt, less current installments  | 16,900            | 16,450                  |
| Deferred income tax liabilities - non-current  | 2,172             | 1,325                   |
| Other long term liabilities  | 4,785             | 4,574                   |
| Total liabilities  | 43,619            | 40,448                  |
| Commitments and contingencies  |                   |                         |
| Stockholders' equity:  |                   |                         |

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|  |            |            |
|--|------------|------------|
| 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; 41,081,052 and 40,308,763 shares issued and 33,335,545 and 32,563,256 shares outstanding, respectively | 401        | 397        |
| Additional paid-in-capital   | 207,618    | 206,656    |
| Accumulated deficit  | (94,085 )  | (92,684 )  |
| Accumulated other comprehensive loss   | (12,763 )  | (8,233 )   |
| Treasury stock at cost, 7,745,507 common shares  | (10,668 )  | (10,668 )  |
| Total stockholders' equity   | 90,503     | 95,468     |
| Total liabilities and stockholders' equity   | \$ 134,122 | \$ 135,916 |

See accompanying notes to unaudited consolidated financial statements.

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

|   | Three Months Ended<br>March 31, |          |
|---|---------------------------------|----------|
|   | 2015                            | 2014     |
| Revenues  | \$25,763                        | \$25,893 |
| Cost of revenues (exclusive of items shown separately below)                        | 14,285                          | 14,132   |
| Gross profit  | 11,478                          | 11,761   |
| Sales and marketing expenses  | 5,199                           | 4,432    |
| General and administrative expenses   | 4,831                           | 4,251    |
| Research and development expenses   | 1,748                           | 973      |
| Restructuring charges   | 57                              | 137      |
| Amortization of intangible assets   | 793                             | 634      |
| Total operating expenses  | 12,628                          | 10,427   |
| Operating (loss) income   | (1,150 )                        | 1,334    |
| Other income (expense):   |                                 |          |
| Foreign exchange  | 223                             | (81 )    |
| Interest expense  | (222 )                          | (265 )   |
| Interest income   | 1                               | 14       |
| Other (expense) income, net   | (616 )                          | 17       |
| Other expense, net  | (614 )                          | (315 )   |
| (Loss) income before income taxes   | (1,764 )                        | 1,019    |
| Income tax (benefit) expense  | (363 )                          | 300      |
| Net (loss) income   | \$(1,401 )                      | \$719    |
| (Loss) earnings per share:  |                                 |          |
| Basic (loss) earnings per common share  | \$(0.04 )                       | \$0.02   |
| Diluted (loss) earnings per common share  | \$(0.04 )                       | \$0.02   |
| Weighted average common shares:   |                                 |          |
| Basic   | 32,908                          | 31,847   |
| Diluted   | 32,908                          | 32,925   |
| Comprehensive (loss) income:  |                                 |          |
| Net (loss) income   | \$(1,401 )                      | \$719    |
| Foreign currency translation adjustments  | (4,497 )                        | 215      |
| Derivatives qualifying as hedges, net of tax:                                       |                                 |          |
| Loss on derivative instruments designated and qualifying as cash flow hedges        | (59 )                           | (24 )    |
| Amounts reclassified from accumulated other comprehensive loss to net (loss) income | 26                              | 35       |
| Total comprehensive (loss) income   | \$(5,931 )                      | \$945    |

See accompanying notes to unaudited consolidated financial statements.



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

|  | Three Months Ended<br>March 31, |          |
|--|---------------------------------|----------|
|  | 2015                            | 2014     |
| <b>Cash flows from operating activities:</b>   |                                 |          |
| Net (loss) income  | \$(1,401 )                      | \$719    |
| Adjustments to reconcile net (loss) income to net cash (used in) provided by operating activities: |                                 |          |
| Stock compensation expense   | 580                             | 447      |
| Depreciation   | 364                             | 300      |
| Loss (gain) on disposal of fixed assets  | 19                              | (76 )    |
| Non-cash restructuring credits   | -                               | (102 )   |
| Amortization of catalog costs  | 6                               | 13       |
| Provision for allowance for doubtful accounts  | 6                               | 27       |
| Amortization of intangible assets  | 793                             | 634      |
| Amortization of deferred financing costs   | 15                              | 15       |
| Deferred income taxes  | (255 )                          | 35       |
| Changes in operating assets and liabilities:   |                                 |          |
| Decrease (increase) in accounts receivable   | 115                             | (437 )   |
| (Increase) decrease in inventories   | (758 )                          | 48       |
| (Increase) decrease in other receivables and other assets  | (149 )                          | 5        |
| Increase (decrease) in trade accounts payable  | 790                             | (24 )    |
| (Decrease) increase in accrued income taxes  | (301 )                          | 25       |
| Decrease in accrued expenses   | (648 )                          | (489 )   |
| Increase (decreased) in deferred revenue   | 355                             | (29 )    |
| Decrease in other liabilities  | (28 )                           | (39 )    |
| Net cash (used in) provided by operating activities  | (497 )                          | 1,072    |
| <b>Cash flows (used in) provided by investing activities:</b>                                      |                                 |          |
| Additions to property, plant and equipment   | (1,044 )                        | (282 )   |
| Proceeds from sales of property, plant and equipment   | -                               | 113      |
| Acquisitions, net of cash acquired   | (4,545 )                        | -        |
| Net cash used in investing activities  | (5,589 )                        | (169 )   |
| <b>Cash flows provided by (used in) financing activities:</b>                                      |                                 |          |
| Proceeds from issuance of debt   | 3,300                           | -        |
| Repayments of debt   | (2,850 )                        | (1,250 ) |
| Net proceeds from issuance of common stock   | 382                             | 319      |
| Net cash provided by (used in) financing activities  | 832                             | (931 )   |
| Effect of exchange rate changes on cash  | (849 )                          | 94       |
| Decrease (increase) in cash and cash equivalents   | (6,103 )                        | 66       |
| Cash and cash equivalents at the beginning of period   | 14,134                          | 25,771   |
| Cash and cash equivalents at the end of period   | \$8,031                         | \$25,837 |



Supplemental disclosures of cash flow information:

|  |        |        |
|--|--------|--------|
| Cash paid for interest                     | \$ 175 | \$ 268 |
| Cash paid for income taxes, net of refunds | \$ 350 | \$ 433 |

See accompanying notes to unaudited consolidated financial statements.

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HARVARD BIOSCIENCE, INC.

NOTES TO UNAUDITED CONSOLIDATED FINANCIAL STATEMENTS

1. Basis of Presentation and Summary of Significant Accounting Policies

Basis of Presentation

The unaudited consolidated financial statements of Harvard Bioscience, Inc. and its wholly-owned subsidiaries (collectively, “Harvard Bioscience” or the “Company”) as of March 31, 2015 and for the three months ended March 31, 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 March 31, 2015, results of operations and comprehensive (loss) income for the three months ended March 31, 2015 and 2014 and cash flows for the three months ended March 31, 2015 and 2014, as applicable, have been made. The results of operations for the three months ended March 31, 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. This standard will be effective as of the beginning of the Company’s 2017 fiscal year. In April 2015 the FASB issued an exposure draft proposing a one-year delay of the effective date. Under the proposed amendments, the standard would take effect in 2018 for calendar year-end public entities. The proposal is open for comment through May 29, 2015. The Company is assessing the new standard and has not yet determined the impact to the consolidated financial statements.

3. Accumulated Other Comprehensive Loss

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

| (in thousands)                                    | Foreign<br>currency<br>translation<br>adjustments | Derivatives<br>qualifying<br>as<br>hedges | Defined<br>benefit<br>pension<br>plans | Total       |
|---|---|---|--|-------------|
| Balance at December 31, 2014                      | \$(4,658 )  | \$(18 )                                   | \$(3,557 )                             | \$(8,233 )  |
| Other comprehensive loss before reclassifications | (4,497 )  | (59 )                                     | -                                      | (4,556 )    |
| Amounts reclassified from AOCI                    | -   | 26  | -                                      | 26          |
| Other comprehensive loss                          | (4,497 )  | (33 )                                     | -                                      | (4,530 )    |
| Balance at March 31, 2015                         | \$(9,155 )  | \$(51 )                                   | \$(3,557 )                             | \$(12,763 ) |

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## 4. Acquisitions

The Company completed one acquisition during the three months ended March 31, 2015.

## HEKA Elektronik

On January 8, 2015, the Company, through its wholly-owned Ealing Scientific Limited and Multi Channel Systems MCS GmbH 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 Electronics Incorporated, based in Chester, Nova Scotia, 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<br>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                       | \$5,928           |

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 unaudited 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.

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|                   | Three Months Ended<br>March 31,<br>2015          2014<br>(in thousands) |          |
|-------------------|---|----------|
| Pro Forma         |   |          |
| Revenues          | \$25,860  | \$27,274 |
| Net (loss) income | (1,390 )  | 793      |

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 (“MCS”), 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 preliminarily allocated to tangible and intangible assets acquired as follows:

|  | (in<br>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 unaudited 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<br>Months<br>Ended<br>March 31,<br>2014<br>(in<br>thousands) |
|------------|--|
| Pro Forma  |  |
| Revenues   | \$27,713   |
| Net income | 801  |

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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 preliminarily allocated to tangible and intangible assets acquired as follows:

|  | (in<br>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 \$0.6 million and \$0 for the three months ended March 31, 2015 and 2014, respectively.

## 5. Goodwill and Other Intangible Assets

Intangible assets consist of the following:

|                                | March 31, 2015 |                             | December 31, 2014 |                             | Weighted<br>Average<br>Life (a) |
|--------------------------------|----------------|-----------------------------|-------------------|-----------------------------|---------------------------------|
|                                | Gross          | Accumulated<br>Amortization | Gross             | Accumulated<br>Amortization |                                 |
| Amortizable intangible assets: | (in thousands) |                             |                   |                             |                                 |



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|   |           |             |           |             |      |       |
|---|-----------|-------------|-----------|-------------|------|-------|
| Existing technology   | \$ 15,981 | \$ (10,986) | \$ 15,538 | \$ (11,198) | 7.7  | Years |
| Trade names   | 7,628     | (2,665 )    | 7,114     | (2,557 )    | 9.7  | Years |
| Distribution agreements/customer relationships              | 23,643    | (10,876)    | 22,730    | (10,681)    | 10.6 | Years |
| Patents   | 245       | (59 )       | 256       | (49 )       | 3.9  | Years |
| Total amortizable intangible assets                         | 47,497    | \$ (24,586) | 45,638    | \$ (24,485) |      |       |
| Indefinite-lived intangible assets:                         |           |             |           |             |      |       |
| Goodwill  | 40,339    |             | 39,822    |             |      |       |
| Other indefinite-lived intangible assets                    | 1,222     |             | 1,252     |             |      |       |
| Total goodwill and other indefinite-lived intangible assets | 41,561    |             | 41,074    |             |      |       |
| Total intangible assets                                     | \$ 89,058 |             | \$ 86,712 |             |      |       |

(a) Weighted average life as of March 31, 2015.

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The change in the carrying amount of goodwill for the three months ended March 31, 2015 is as follows:

|   | (in<br>thousands) |
|---|-------------------|
| Balance at December 31, 2014                | \$39,822          |
| Goodwill arising from business combinations | 2,061             |
| Effect of change in currency translation    | (1,544 )          |
| Balance at March 31, 2015                   | \$40,339          |

Intangible asset amortization expense was \$0.8 million and \$0.6 million for the three months ended March 31, 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, \$2.7 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:

|                 | March 31,<br>2015 | December<br>31,<br>2014 |
|-----------------|-------------------|-------------------------|
|                 | (in thousands)    |                         |
| Finished goods  | \$10,269          | \$10,138                |
| Work in process | 1,355             | 946                     |
| Raw materials   | 10,468            | 9,447                   |
| Total           | \$22,092          | \$20,531                |

## 7. Property, Plant and Equipment

Property, plant and equipment consist of the following:

|  | March 31,<br>2015 | December<br>31,<br>2014 |
|--|-------------------|-------------------------|
|  | (in thousands)    |                         |
| Land, buildings and leasehold improvements | \$2,626           | \$2,595                 |
| Machinery and equipment                    | 9,747             | 10,102                  |
| Computer equipment and software            | 6,753             | 6,322                   |
| Furniture and fixtures                     | 1,304             | 1,125                   |
| Automobiles                                | 128               | 56                      |
|  | 20,558            | 20,200                  |
| Less: accumulated depreciation             | (14,977 )         | (15,010 )               |
| Property, plant and equipment, net         | \$5,581           | \$5,190                 |



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## 8. Restructuring and Other Exit Costs

## 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. The Company recorded restructuring charges of approximately \$27,000 representing severance costs. Additional charges related to this plan are expected to be incurred through the third quarter of 2015, and include, but are not limited to, contract termination costs, as well as moving and employee relocation costs. 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:

|   | Severance<br>Costs<br>(in<br>thousands) |
|---|---|
| Restructuring charges                   | \$27                                    |
| Cash payments                           | -                                       |
| Restructuring balance at March 31, 2015 | \$27                                    |

## 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. During the three months ended March 31, 2015, the Company recorded restructuring charges of approximately \$30,000. Additional charges related to this plan are expected to be incurred through the third quarter of 2015, and include, but are not limited to, contract termination costs, as well as moving and employee relocation costs. 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:

|  | Severance<br>Costs | Other<br>(in thousands) | Total |
|--|--------------------|-------------------------|-------|
| Restructuring balance at December 31, 2014 | \$626              | \$-                     | \$626 |
| Restructuring charges                      | -                  | 30                      | 30    |
| Cash payments                              | -                  | (30 )                   | (30 ) |
| Effect of change in currency translation   | (21 )              | -                       | (21 ) |
| Restructuring balance at March 31, 2015    | \$605              | \$-                     | \$605 |

## 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 March 31, 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:

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

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## 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. As of March 31, 2015, the Company had no remaining liability related to this plan on its balance sheet. Activity and liability balances related to these charges were as follows:

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

Aggregate net restructuring charges for the three months ended March 31, 2015 and 2014 were as follows:

|                       | Three Months Ended<br>March 31,<br>2015      2014<br>(in thousands) |       |
|-----------------------|---|-------|
| Restructuring charges | \$57  | \$137 |

## 9. Related Party Transactions

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

In connection with the HART spin-off, the Company entered into various commercial agreements with HART. These agreements include: (i) a Separation and Distribution Agreement to effect the separation and spin-off distribution and provide other agreements to govern the Company’s relationship with HART after the spin-off; (ii) an Intellectual Property Matters Agreement, which governs various intellectual property related arrangements between the Company and HART, including the separation of intellectual property rights between the Company and HART, as well as certain related cross-licenses between the two companies; (iii) a Product Distribution Agreement, which provides that each company will become the exclusive distributor for the other party for products such other party develops for sale in the markets served by the other; (iv) a Tax Sharing Agreement, which governs the Company’s and HART’s

respective rights, responsibilities and obligations with respect to tax liabilities and benefits, tax attributes, the preparation and filing of tax returns, the control of audits and other tax proceedings and other matters regarding taxes for periods before, during and after the spin-off; (v) a Transition Services Agreement, which provides for certain services to be performed on a transitional basis by the Company to facilitate HART's transition into a separate public reporting company. As part of the Transition Services Agreement, the Company provided certain support services to HART, for up to one year following the spin-off date, including, among others, accounting, payroll, human resources and information technology services, with the charges for the transition services generally intended to allow the Company to fully recover the costs directly associated with providing the services, plus all out-of-pocket costs and expenses; and (vi) a Sublease pursuant to which the Company has subleased certain premises in Holliston, MA to HART. The Transition Services Agreement expired on November 1, 2014.

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The Company recorded revenues of approximately \$48,000 and \$0.1 million for the three months ended March 31, 2015 and 2014, respectively, as a result of the exclusive distribution rights pursuant to the Product Distribution Agreement. The Company's operating expenses were reduced by \$0.1 million for the three months ended March 31, 2014 as a result of the fees the Company charged to HART for services provided pursuant to the Transition Services Agreement. In addition, the Company's rent expense was reduced by \$42,000 and \$40,000 for the three months ended March 31, 2015 and 2014, respectively, as a result of sublease rent charged to HART pursuant to a sublease between the two companies.

David Green, who is currently a Director of the Company and was also formerly the Company's President and interim CEO, was the Chairman and CEO of HART until his resignation on April 17, 2015. Mr. Green remains a member of HART's Board of Directors.

As part of the acquisitions of MCS, TBSI, and HEKA, 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 March 31, 2015. Pursuant to the lease agreements, the Company incurred rent expense of approximately \$55,000, \$11,000 and \$39,000 to the former owners of MCS, TBSI, and HEKA, respectively, for the three months ended March 31, 2015.

## 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<br>Balance | Payments | Additions/<br>(Credits)<br>(in thousands) | Other | Ending<br>Balance |
|-----------------------------------|----------------------|----------|---|-------|-------------------|
| Year ended December 31, 2014      | \$ 305               | (102 )   | 49  | -     | \$ 252            |
| Three months ended March 31, 2015 | \$ 252               | (2 )     | (71 )                                     | (19 ) | \$ 160            |

## 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 March 31, 2015, the principal employer of the Harvard Apparatus Limited pension plan was changed from Harvard Apparatus Limited to Biochrom Limited. As of March 31, 2015, 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<br>March 31,<br>2015      2014<br>(in thousands) |        |
|--|---|--------|
| Components of net periodic benefit cost: |   |        |
| Service cost                             | \$-   | \$8    |
| Interest cost                            | 177   | 221    |
| Expected return on plan assets           | (166 )  | (163 ) |



|                           |      |       |
|---------------------------|------|-------|
| Net amortization loss     | 75   | 45    |
| Net periodic benefit cost | \$86 | \$111 |

For the three months ended March 31, 2015 and 2014, the Company contributed \$0.2 million for both periods to its defined benefit pension plans. The Company expects to contribute approximately \$0.6 million to its defined benefit pension plans during the remainder of 2015.

As of March 31, 2015 and December 31, 2014, the Company had an underfunded pension liability of approximately \$4.3 million and \$4.4 million, respectively, included in the other liabilities – non-current line item in the consolidated balance sheets.

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## 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 \$0.4 million for the three months ended March 31, 2015 and 2014, respectively.

Future minimum lease payments for operating leases, with initial or remaining terms in excess of one year at March 31, 2015, are as follows:

|                            | Operating<br>Leases<br>(in<br>thousands) |
|----------------------------|--|
| 2016                       | \$1,708                                  |
| 2017                       | 1,531                                    |
| 2018                       | 1,489                                    |
| 2019                       | 1,302                                    |
| 2020                       | 1,304                                    |
| Thereafter                 | 4,632                                    |
| Net minimum lease payments | \$11,966                                 |

## 13. Capital Stock

## Common Stock

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

## Preferred Stock

The Company's Board of Directors has the authority to issue up to 5.0 million shares of preferred stock and to determine the price privileges and other terms of the shares. The Board of Directors may exercise this authority without any further approval of stockholders. As of March 31, 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 585,188 shares were issued as of March 31, 2015. During the three months ended March 31, 2015 and 2014, no shares of the Company's common stock were issued under the ESPP.

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## Stock-Based Payment Awards

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

Stock option and restricted stock unit activity under the Company's Third Amended and Restated 2000 Stock Option and Incentive Plan (as amended, the "2000 Plan") for three months ended March 31, 2015 was as follows:

|                              | Stock Options             |                                 | Restricted Stock Units             |                       |
|------------------------------|---------------------------|---------------------------------|------------------------------------|-----------------------|
|                              | Stock Options Outstanding | Weighted Average Exercise Price | Restricted Stock Units Outstanding | Grant Date Fair Value |
| Balance at December 31, 2014 | 6,263,112                 | \$3.42                          | 306,397                            | \$4.30                |
| Granted                      | 499,500                   | 5.51                            | -                                  | -                     |
| Exercised                    | (1,305,193)               | 2.95                            | -                                  | -                     |
| Vested (RSUs)                | -                         | -                               | (88,648)                           | -                     |
| Cancelled / forfeited        | (125,598)                 | 3.65                            | -                                  | -                     |
| Balance at March 31, 2015    | 5,331,821                 | \$3.73                          | 217,749                            | \$4.14                |

The weighted average fair value of the options granted under the 2000 Plan during the three months ended March 31, 2015 and 2014 was \$2.30 and \$1.69, respectively. The following assumptions were used to estimate the fair value of stock options granted during the three months ended March 31, 2015 and 2014:

|                                    | Three Months Ended March 31, |       |       |       |
|------------------------------------|------------------------------|-------|-------|-------|
|                                    | 2015                         |       | 2014  |       |
| Volatility                         | 42.34                        | %     | 44.21 | %     |
| Risk-free interest rate            | 1.74                         | %     | 1.22  | %     |
| Expected holding period (in years) | 5.70                         | years | 4.19  | years |
| Dividend yield                     | -                            | %     | -     | %     |

The Company used historical volatility to calculate the expected volatility as of March 31, 2015 and 2014. Historical volatility was determined by calculating the mean reversion of the daily adjusted closing stock price. The risk-free interest rate assumption is based upon observed U.S. Treasury bill interest rates (risk-free) appropriate for the term of the Company's stock options. The expected holding period of stock options represents the period of time options are expected to be outstanding and is based on historical experience. The vesting period ranges from one to four years and the contractual life is ten years.

Stock-based compensation expense related to stock options, restricted stock units and the ESPP for the three months ended March 31, 2015 and 2014 was allocated as follows:

|                  | Three Months Ended March 31, |      |
|------------------|------------------------------|------|
|                  | 2015                         | 2014 |
| Cost of revenues | \$21                         | \$28 |

(in thousands)

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|                                |       |       |
|--------------------------------|-------|-------|
| Sales and marketing            | 87    | 70    |
| General and administrative     | 449   | 341   |
| Research and development       | 23    | 8     |
| Total stock-based compensation | \$580 | \$447 |

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The Company did not capitalize any stock-based compensation.

## Earnings per share

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

|  | Three Months Ended<br>March 31, |            |
|--|---------------------------------|------------|
|  | 2015                            | 2014       |
| Basic  | 32,908,101                      | 31,846,897 |
| Effect of assumed conversion of employee and director stock options and restricted stock units | -                               | 1,077,964  |
| Diluted  | 32,908,101                      | 32,924,861 |

Excluded from the shares used in calculating the diluted earnings per common share in the above table are options to purchase approximately 5,331,821 and 2,680,723 shares of common stock for the three months ended March 31, 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 \$20.0 million revolving credit loan agreement 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 an amendment to the Credit Agreement discussed in Note 18 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.

Prior to the amendment to the Credit Agreement discussed in Note 18, 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 3.0%. Additionally, prior to the amendment as discussed in Note 18, 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 2.5%. The Company was required to fix the rate of interest on at least 50% of the Term Loan and the DDTL through the purchase of interest rate swaps. The Term Loan and DDTL each have interest payments due at the end of the applicable LIBOR period, or monthly with respect to BBA LIBOR borrowings, and principal payments due quarterly. The Revolving Line has interest payments due at the end of the applicable LIBOR period, or monthly with respect to BBA LIBOR borrowings.

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

As of March 31, 2015 and December 31, 2014, the Company had borrowings of \$21.9 million and \$21.5 million, respectively, outstanding under its Credit Agreement. As of March 31, 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 \$6.2 million.

As of March 31, 2015, the weighted effective interest rates on the Company's Term Loan, DDTL and Revolving Line borrowings were 3.96%, 3.55% and 2.68%, respectively.

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

|                            | March<br>31,<br>2015 | December 31,<br>2014 |
|----------------------------|----------------------|----------------------|
|                            | (in thousands)       |                      |
| Long-term debt:            |                      |                      |
| Term loan                  | \$9,000              | \$ 9,750             |
| DDTL                       | 7,000                | 7,500                |
| Revolving line             | 5,900                | 4,200                |
| Total debt                 | 21,900               | 21,450               |
| Less: current installments | (5,000 )             | (5,000 )             |
| Long-term debt             | \$16,900             | \$ 16,450            |

## 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.

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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 March 31, 2015 was \$12.5 million. The Term Loan swap contract converted specific variable-rate debt into fixed-rate debt and fixed the LIBOR rate associated with the Term Loan at 0.96% plus a bank margin of 3.0%. The DDTL swap contract converted specific variable-rate debt into fixed-rate debt and fixed the LIBOR rate associated with the Term Loan at 0.93% plus a bank margin of 3.0%. The interest rate swaps were designated as cash flow hedges in accordance with ASC 815, Derivatives and Hedging.

The following table presents the notional amount and fair value of the Company's derivative instruments as of March 31, 2015 and December 31, 2014.

|   | Balance sheet classification  | March                          | March 31, 2015                   |
|---|-------------------------------|--------------------------------|----------------------------------|
|   |                               | 31, 2015<br>Notional<br>Amount | March 31, 2015<br>Fair Value (a) |
| (in thousands)  |                               |                                |                                  |
| Derivatives designated as hedging instruments under ASC 815 |                               |                                |                                  |
| Interest rate swap  | Other liabilities-non current | \$12,500                       | \$ (51 )                         |
| (in thousands)  |                               |                                |                                  |
|   | Balance sheet classification  | December                       | December 31,                     |
|   |                               | 31, 2014<br>Notional<br>Amount | 2014<br>Fair Value (a)           |
| Derivatives designated as hedging instruments under ASC 815 |                               |                                |                                  |
| Interest rate swap  | 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 income for the three months ended March 31, 2015 and 2014:

| Derivatives in Hedging Relationships | Amount of gain or (loss)<br>recognized in OCI on<br>derivative (effective<br>portion)<br>Three Months Ended<br>March 31,<br>2015          2014<br>(in thousands) |         |
|--------------------------------------|--|---------|
| Interest rate swaps                  | \$(59  | ) \$(24 |

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The following table summarizes the reclassifications out of accumulated other comprehensive (loss) income for the three months ended March 31, 2015 and 2014:

| Details about AOCI<br>Components | Amount reclassified from AOCI into income<br>(effective portion)<br>Three Months Ended March 31, |       | Location of amount<br>reclassified from AOCI<br>into income (effective<br>portion) |
|----------------------------------|--|-------|--|
|                                  | 2015   | 2014  |  |
|                                  | (in thousands)   |       |  |
| Interest rate swaps              | \$ 26  | \$ 35 | Interest expense   |

As of March 31, 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 March 31, 2015 |         |         | Total |
|-------------------------------|---------------------------------|---------|---------|-------|
|                               | Level 1                         | Level 2 | Level 3 |       |
| <b>Liabilities:</b>           |                                 |         |         |       |
| Interest rate swap agreements | \$-                             | \$51    | \$-     | \$51  |

| (In thousands)                | Fair Value as of December 31, 2014 |         |         | Total |
|-------------------------------|------------------------------------|---------|---------|-------|
|                               | Level 1                            | Level 2 | Level 3 |       |
| <b>Liabilities:</b>           |                                    |         |         |       |
| 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 approximately \$0.4 million benefit and \$0.3 million expense for the three months ended March 31, 2015 and 2014, respectively. The effective income tax rate was a benefit of 20.6% for the three months ended March 31, 2015, compared with expense of 29.4% for the same period in 2014. The difference between our effective tax rate quarter over quarter was primarily attributable to increased research and development tax credits and incentive stock option exercises partially offset by acquisition costs in 2015 versus 2014.

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18. Subsequent Events

Debt Amendment

On April 24, 2015, the Company entered into the Third Amendment to the Second Amended and Restated Credit Agreement (the “Third Amendment”) with Bank of America as agent, and Bank of America and Brown Brothers Harriman & Co as lenders. The Third Amendment 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.

Director Retirement

On April 28, 2015, the Company announced the appointment of James Green to its Board of Directors and the retirement of Robert Dishman from our 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 to be recognized in the second quarter of 2015, as part of these modifications, is approximately \$0.1 million.

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,” “think,” “potential,” “objectives,” “optimistic,” “strategy,” “goals,” “sees,” “new,” “guidance,” “future,” “continue,” “drive,” “projects,” “develop,” “possible,” “emerging,” “opportunity,” “pursue” and similar expressions intended to identify forward-looking statements. These statements reflect our current views with respect to future events and are based on assumptions and subject to risks and uncertainties. Given these uncertainties, you should not place undue reliance on these forward-looking statements. Factors that may cause our actual results to differ materially from those in the forward-looking statements include sustained uncertainty concerning government spending; economic and political conditions generally and those affecting pharmaceutical and biotechnology industries; economic, political and other risks associated with international revenues and operations; the seasonal nature of purchasing in Europe; currency exchange rate fluctuations; failure of any banking institution in which we deposit our funds or its failure to provide services; our substantial debt and our ability to meet the financial covenants contained in our credit facility; our failure to raise or generate capital necessary to implement our acquisition and expansion strategy; the failure of our spin-off of Harvard Apparatus Regenerative Technology, Inc., or HART, to qualify as a transaction that is generally tax-free for U.S. federal income tax purposes; the failure of HART to indemnify us for any liabilities associated with HART’s

business; unanticipated costs relating to acquisitions, unanticipated costs arising in connection with our consolidation of business functions and any restructuring initiatives; our failure to expand in Asia and other emerging markets; our inability to manage our growth; competition from our competitors; our failure to expand our product offerings, introduce new products or commercialize new technologies; technological changes resulting in our products becoming obsolete; our failure to identify potential acquisition candidates and successfully close such acquisitions with favorable pricing or integrate acquired businesses or technologies; impact of any impairment of our goodwill or intangible assets; our ability to retain key personnel; failure or inadequacy of our information technology structure; rising commodity and precious metals costs; our ability to protect our intellectual property and operate without infringing on others' intellectual property; exposure to product and other liability claims; plus other factors described under the heading "Item 1A. Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 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.

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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, GE Healthcare, 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 stocks we owned in HART. The results of the HART business are included in discontinued operations for all periods presented.

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, finance and marketing operations of our Denville Scientific facility and manufacturing operations of our Biochrom facility. Additionally, during the first quarter 2015, we initiated plans to relocate the operations of our Coulbourn subsidiary to our corporate headquarters. We believe the restructuring program positions the Company to stabilize, focus on, and grow the life science business.

On October 1, 2014, we acquired all of the issued and outstanding shares of two life science companies for approximately \$12.7 million, net of cash acquired: Multi Channel Systems MCS GmbH, or MCS, which has its principal offices in Germany, and Triangle BioSystems, Inc., or TBSI, which has its principal offices in North Carolina. We funded the acquisitions of MCS and TBSI from our existing cash balances and borrowings under our credit facility, respectively.

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

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



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operational efficiencies.

#### Subsequent Event

On April 24, 2015, we entered into the Third Amendment to the Second Amended and Restated Credit Agreement (the “Third Amendment”) with Bank of America as agent, and Bank of America and Brown Brothers Harriman & Co as lenders. The Third Amendment amended our Second Amended and Restated Revolving Credit Agreement with Bank of America, as agent, and Bank of America and Brown Brothers Harriman & Co as lenders. The Third Amendment extended the maturity date of the Revolving Line to March 29, 2018 from March 29, 2016, 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.

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### 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 60% and 57% of our revenues for the three months ended March 31, 2015 and 2014, 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 March 31, 2015 and 2014, approximately 40% and 43% of our revenues, respectively, were derived from sales to distributors.

For the three months ended March 31, 2015 and 2014, approximately 66% and 65% of our revenues, respectively, were derived from products we manufacture, approximately 9% and 11%, 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 25%, for both periods, were derived from distributed products sold under our brand names.

For the three months ended March 31, 2015 and 2014, approximately 41% and 39% of our revenues, respectively, 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 product revenues.** Cost of product revenues includes material, labor and manufacturing overhead costs, obsolescence charges, packaging costs, warranty costs, shipping costs and royalties. Our cost of product revenues may vary over time based on the mix of products sold. We sell products that we manufacture and products that we purchase from third parties. The products that we purchase from third parties have a higher cost of product revenues as a percent of revenues because the profit is effectively shared with the original manufacturer. We anticipate that our manufactured products will continue to have a lower cost of product revenues as a percentage of revenues as compared with the cost of non-manufactured products for the foreseeable future. Additionally, our cost of product revenues as a percent of product revenues will vary based on mix of direct to end user sales and distributor sales, mix by product line and mix by geography.

**Sales and marketing expenses.** Sales and marketing expense consists primarily of salaries and related expenses for personnel in sales, marketing and customer support functions. We also incur costs for travel, trade shows, demonstration equipment, public relations and marketing materials, consisting primarily of the printing and distribution of our catalogs, supplements and the maintenance of our websites. We may from time to time expand our marketing efforts by employing additional technical marketing specialists in an effort to increase sales of selected categories of products. We may also from time to time expand our direct sales organizations in an effort to concentrate

on key accounts or promote certain product lines.

**General and administrative expenses.** General and administrative expense consists primarily of salaries and other related costs for personnel in executive, finance, accounting, information technology and human 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.

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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 March 31, 2015 and 2014 was \$0.6 million and \$0.4 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 \$26.7 million and \$26.4 million for the three months ended March 31, 2015 and 2014, respectively. Excluding the effects of currency translation, our bookings increased \$1.4 million, or 5.5% from the previous year.

Our order backlog was approximately \$7.7 million and \$5.6 million as of March 31, 2015 and 2014, respectively. Excluding the effects of currency translation, our backlog increased \$2.7 million, or 48.3% from the previous year. The increase in backlog was primarily the result of our acquisitions of MCS, TBSI and HEKA and the timing of customer orders and shipments. We include in backlog only those orders for which we have received valid purchase orders. Purchase orders may be cancelled at any time prior to shipment. Our backlog as of any particular date may not be representative of actual sales for any succeeding period.

## Selected Results of Operations

Three Months Ended March 31, 2015 compared to Three Months Ended March 31, 2014

|                                     | Three Months Ended     |                   | Dollar<br>Change | %<br>Change |   |
|-------------------------------------|------------------------|-------------------|------------------|-------------|---|
|                                     | 2015                   | March 31,<br>2014 |                  |             |   |
|                                     | (dollars in thousands) |                   |                  |             |   |
| Revenues                            | \$25,763               | \$25,893          | (130 )           | -0.5        | % |
| Cost of revenues                    | 14,285                 | 14,132            | 153              | 1.1         | % |
| Gross margin percentage             | 44.6 %                 | 45.4 %            | N/A              | -1.9        | % |
| Sales and marketing expenses        | 5,199                  | 4,432             | 767              | 17.3        | % |
| General and administrative expenses | 4,831                  | 4,251             | 580              | 13.6        | % |
| Research and development expenses   | 1,748                  | 973               | 775              | 79.7        | % |
| Restructuring charges               | 57                     | 137               | (80 )            | -58.4       | % |
| Amortization of intangible assets   | 793                    | 634               | 159              | 25.1        | % |

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 the operating results of the Company. 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 March 31, 2015 were \$25.8 million, a decrease of approximately 0.5%, or \$0.1 million compared to revenues of \$25.9 million for the three months ended March 31, 2014. Revenues for the three months ended March 31, 2015 include the acquisitions of MCS, TBSI and HEKA.

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Revenues from acquisitions were offset by a negative impact of currency translation. The strengthening of the U.S. dollar resulted in negative currency translation of approximately 4.3%, and revenues from international customers were negatively impacted as a stronger U.S. dollar resulted in fewer international shipments. In addition, we experienced softness in the academic and government end markets because of budget delays and weather conditions.

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

|                         | For the<br>Three<br>Months<br>Ended<br>March 31,<br>2015 |   |
|-------------------------|--|---|
| Growth                  | 3.8  | % |
| Foreign exchange effect | -4.3   | % |
| Total revenue decline   | -0.5   | % |

## Cost of product revenues

Cost of product revenues increased \$0.2 million, or 1.1%, to \$14.3 million for the three months ended March 31, 2015 compared with \$14.1 million for the three months ended March 31, 2014. Gross profit margin as a percentage of revenues decreased to 44.6% for the three months ended March 31, 2015 compared with 45.4% for the same period in 2014. The decrease in gross profit margin was due primarily to lower revenues and unfavorable currency translation, partially offset by the contributions from MCS, TBSI and HEKA.

## Sales and marketing expenses

Sales and marketing expenses increased \$0.8 million, or 17.3%, to \$5.2 million for the three months ended March 31, 2015 compared with \$4.4 million for the three months ended March 31, 2014. The increase was primarily due to our acquisitions, partially offset by favorable currency translation.

## General and administrative expenses

General and administrative expenses were \$4.8 million for the three months ended March 31, 2015, an increase of \$0.6 million, or 13.6%, compared with \$4.3 million for the three months ended March 31, 2014. The increase was primarily due to our acquisitions 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 \$1.7 million for the three months ended March 31, 2015, an increase of \$0.8 million, or 79.7%, compared with \$1.0 million for the three months ended March 31, 2014. The increase was primarily due to our acquisitions and the reversal of patent related costs during the three months ended March 31, 2014, partially offset by favorable currency translation.

## Restructuring

Restructuring charges were \$57,000 for three months ended March 31, 2015 compared with \$137,000 for the three months ended March 31, 2014. The decrease was due to additional charges recorded during the three months ended March 31, 2014 related to the company-wide restructuring plan we implemented during the year ended December 31, 2013, partially offset by charges recorded during three months ended March 31, 2015 related to plans commenced during the year ended December 31, 2014 and the first quarter ended March 31, 2015. The 2013 restructuring plan realigned global operations and included a reduction of our workforce of approximately 13%, as well as the elimination of the position of Chief Operating Officer. The 2014 restructuring plan realigned global operations and included actions to move the Biochrom and Denville operations to Holliston, MA and Charlotte, NC, respectively. The 2015 restructuring plan included actions to move the Coulbourn operations to Holliston, MA.

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### Amortization of intangible assets

Amortization of intangible asset expenses was \$0.8 million for the three months ended March 31, 2015 compared with \$0.6 million for the three months ended March 31, 2014.

### Other expense, net

Other expense, net, was \$0.6 million and \$0.3 million for the three months ended March 31, 2015 and 2014, respectively. Interest expense was \$0.2 million for the three months ended March 31, 2015 compared to \$0.3 million for the three months ended March 31, 2014. The increase in other expense, net was primarily due to \$0.6 million in acquisition related costs incurred during the three months ended March 31, 2015 compared to \$0 for the three months ended March 31, 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 three months ended March 31, 2015, compared to \$0.1 million in foreign currency losses during the three months ended March 31, 2014.

### Income taxes

Income tax was approximately \$0.4 million benefit and \$0.3 million expense for the three months ended March 31, 2015 and 2014, respectively. The effective income tax rate was a benefit of 20.6% for the three months ended March 31, 2015, compared with 29.4% for the same period in 2014. The difference between our effective tax rate quarter over quarter was primarily attributable to increased research and development tax credits and incentive stock option exercises partially offset by acquisition costs in 2015 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 March 31, 2015, we held cash and cash equivalents of \$8.0 million, compared with \$14.1 million at December 31, 2014. As of March 31, 2015 and December 31, 2014, we had \$21.9 million and \$21.5 million, respectively, of borrowings outstanding under our credit facility. Total debt, net of cash and cash equivalents was \$13.9 million at March 31, 2015, compared to \$7.3 million at March 31, 2014. In addition, we had an underfunded U.K. pension liability of approximately \$4.3 million and \$4.4 million at March 31, 2015 and December 31, 2014, respectively.

As of March 31, 2015 and December 31, 2014, cash and cash equivalents held by our foreign subsidiaries was \$6.4 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  
(in thousands, unaudited)

|   | Three Months Ended<br>March 31, |          |
|---|---------------------------------|----------|
|   | 2015                            | 2014     |
|   | (in thousands)                  |          |
| <b>Cash flows from operations:</b>                  |                                 |          |
| Net (loss) income                                   | \$(1,401 )                      | \$719    |
| Changes in assets and liabilities                   | (624 )                          | (940 )   |
| Other adjustments to operating cash flows           | 1,528                           | 1,293    |
| Net cash (used in) provided by operating activities | (497 )                          | 1,072    |
| <b>Investing activities:</b>                        |                                 |          |
| Additions to property, plant and equipment          | (1,044 )                        | (282 )   |
| Acquisitions, net of cash acquired                  | (4,545 )                        | -        |
| Other investing activities                          | -                               | 113      |
| Net cash used in investing activities               | (5,589 )                        | (169 )   |
| <b>Financing activities:</b>                        |                                 |          |
| Net proceeds from issuance of (repayments of) debt  | 450                             | (1,250 ) |
| Other financing activities                          | 382                             | 319      |
| Net cash provided by (used in) financing activities | 832                             | (931 )   |
| Effect of exchange rate changes on cash             | (849 )                          | 94       |
| (Decrease) increase in cash and cash equivalents    | \$(6,103 )                      | \$66     |

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Our operating activities used cash of \$0.5 million for the three months ended March 31, 2015, compared with cash provided by operating activities of \$1.1 million for the three months ended March 31, 2014. The decrease in cash flows from operations was primarily due to lower net income quarter over quarter.

Our investing activities used cash of \$5.6 million during the three months ended March 31, 2015, compared to \$0.2 million for the three months ended March 31, 2014. Investing activities during the first quarter 2015 included cash used for acquisitions net of cash acquired and purchases of property, plant and equipment. Investing activities during the first quarter 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 \$1.0 million and \$0.3 million on capital expenditures during the three months ended March 31, 2015 and 2014, respectively. The increase in capital expenditures quarter over quarter was due to the implementation of a new enterprise resource planning (“ERP”) platform across all of our locations, 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 three months ended March 31, 2015, financing activities provided cash of \$0.8 million, compared with \$0.9 million of cash used by financing activities for the three months ended March 31, 2014. During the three months ended March 31, 2015, we borrowed \$3.3 million under our credit facility, repaid \$2.9 million of debt under our credit facility and term loans and ended the quarter with \$21.9 million of borrowings. Net proceeds from the issuance of common stock for the three months ended March 31, 2015 was \$0.4 million, which related to the exercise of stock options. During the three months ended March 31, 2014, we repaid \$1.3 million of debt under our credit facility and term loans, and ended the quarter with \$23.5 million of borrowings. Net proceeds from the issuance of common stock for the three months ended March 31, 2014 was \$0.3 million, which related to the exercise of stock options.

### Borrowing Arrangements

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



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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 British Bankers' Association (BBA) LIBOR as published by Reuters (or other commercially available source providing quotations of BBA LIBOR), plus in either case, a margin of 3.0%. 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 interest rate swaps. The Term Loan and DDTL each have interest payments due at the end of the applicable LIBOR period, or monthly with respect to BBA LIBOR borrowings, and principal payments due quarterly. The Revolving Line has interest payments due at the end of the applicable LIBOR period, or monthly with respect to BBA LIBOR borrowings.

At March 31, 2015, the weighted effective interest rates on the Term Loan, DDTL and Revolving Line borrowings were 3.96%, 3.55% and 2.68%, respectively. The Credit Agreement includes covenants relating to income, debt coverage and cash flow, as well as minimum working capital requirements. The Credit Agreement also contains limitations on our ability to incur additional indebtedness and requires lender approval for acquisitions funded with cash, promissory notes and/or other consideration in excess of \$6.0 million and for acquisitions funded solely with equity in excess of \$10.0 million. As of March 31, 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 \$6.2 million.

On April 24, 2015, we entered into 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.

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 assure you that we will be successful in raising additional capital on favorable terms or at all.

### Critical Accounting Policies

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

During three months ended March 31, 2015, the U.S dollar's strengthening in relation to those currencies resulted in an unfavorable translation effect on our consolidated revenues and a slight favorable translation effect on our consolidated net loss. Changes in foreign currency exchange rates resulted in an unfavorable effect on revenues of \$1.1 million and a favorable effect on expenses of \$1.2 million. During three months ended March 31, 2014, changes in foreign currency exchange rates resulted in increases in revenues of \$0.5 million and expenses of \$0.4 million.

The loss associated with the translation of foreign equity into U.S. dollars included as a component of comprehensive income, was approximately \$4.5 million for the three months ended March 31, 2015, compared to a gain of \$0.2 million for the three months ended March 31, 2014. In addition, currency exchange rate fluctuations included as a component of net (loss) income resulted in approximately \$0.2 million in currency gains during the three months ended March 31, 2015, compared to \$0.1 million in foreign currency losses during the three months ended March 31, 2014.

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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. This standard will be effective as of the beginning of our 2017 fiscal year. In April 2015 the FASB issued an exposure draft proposing a one-year delay of the effective date. Under the proposed amendments, the standard would take effect in 2018 for calendar year-end public entities. The proposal is open for comment through May 29, 2015. We are assessing the new standard and have not yet determined the impact to our consolidated financial statements.

Item 3. Quantitative and Qualitative Disclosures about Market Risk.

The majority of our manufacturing and testing of products occurs in our facilities in the United States, the United Kingdom, Germany, Sweden and Spain. We sell our products globally through our direct catalog sales, our websites, direct sales force and indirect distributor channels. As a result, our financial results are affected by factors such as changes in foreign currency exchange rates and weak economic conditions in foreign markets.

We collect amounts representing a substantial portion of our revenues and pay amounts representing a substantial portion of our operating expenses in foreign currencies. As a result, changes in currency exchange rates from time to time may affect our operating results.

We are exposed to market risk from changes in interest rates primarily through our financing activities. As of March 31, 2015, we had \$21.9 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 March 31, 2015 was \$12.5 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.

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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 March 31, 2015, the weighted effective interest rates on our Term Loan, DDTL and Revolving Line borrowings were 3.96%, 3.55% and 2.68%, respectively. Assuming no other changes which would affect the margin of the interest rate under our Term Loan, DDTL and Revolving Line, the effect of interest rate fluctuations on outstanding borrowings under our Credit Agreement as of March 31, 2015 over the next twelve months is quantified and summarized as follows:

| If compared to the rate as of March 31, 2015 | Interest<br>expense<br>increase<br>(in<br>thousands) |
|--|--|
| Interest rates increase by 1%                | \$94   |
| Interest rates increase by 2%                | \$188  |

#### Item 4. Controls and Procedures.

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

As required by Rules 13a-15(e) and 15d-15(e) under the Exchange Act, our management, under the supervision and with the participation of our Chief Executive Officer and Chief Financial Officer, conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures as of March 31, 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 three months ended March 31, 2015 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. During three months ended March 31, 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.

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| Item 6.          | Exhibits   |
|------------------|--|
| Exhibit<br>Index |  |
| 10.1             | Second Amendment to Employment Agreement between Harvard Bioscience, Inc. and Jeffrey A. Duchemin, dated March 1, 2015.  |
| 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.

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SIGNATURES

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

Date: May 7, 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

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