ENZO BIOCHEM INC
Form 10-Q
June 11, 2018
UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

Mark one

x QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended April 30, 2018

or

o 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 001-09974

ENZO BIOCHEM, INC.
(Exact name of registrant as specified in its charter)

New York (State or Other Jurisdiction of Incorporation or Organization)	13-2866202 (IRS. Employer Identification No.)
527 Madison Ave, New York, New York (Address of Principal Executive office)	10022 (Zip Code)

212-583-0100
(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 has required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes x No o

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 45 of Regulation S-T (§232.405 of that chapter) during the preceding 12 months (or such shorter period that the registrant was required to submit and post such files).

Yes x No o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer a smaller reporting company, or an emerging growth company (as defined in Rule 12b-2 of the Exchange Act).

Large accelerated filer	o		Accelerated filer x
Non-accelerated filer	o	(Do not check if smaller reporting company)	Smaller reporting company o
Emerging growth company o			

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Yes o No o

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act.)

Yes o No x

As of June 1, 2018, the Registrant had 47,165,942 shares of common stock outstanding.

ENZO BIOCHEM, INC.
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Part 1 Financial Information

Item 1 Financial Statements

ENZO BIOCHEM, INC.

CONSOLIDATED BALANCE SHEETS
(in thousands, except share data)

	April 30, 2018 (unaudited)	July 31, 2017
ASSETS		
Current assets:		
Cash and cash equivalents	$ 62,556	$ 64,167
Accounts receivable, net of allowances	14,407	15,180
Inventories	7,278	7,047
Prepaid expenses and other	2,175	2,690
Total current assets	86,416	89,084
Property, plant and equipment, net	7,953	7,901
Goodwill	7,452	7,452
Intangible assets, net	2,149	2,895
Other assets	1,481	333
Total assets	$ 105,451	$ 107,665
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable – trade	$ 8,250	$ 10,350
Accrued liabilities	9,795	6,720
Other current liabilities	623	740
Total current liabilities	18,668	17,810
Other liabilities	404	983
Total liabilities	$ 19,072	$ 18,793
Commitments and contingencies		
Stockholders' equity:		
Preferred Stock, $.01 par value; authorized 25,000,000 shares; no shares issued or outstanding	—	—
Common Stock, $.01 par value; authorized 75,000,000 shares; shares issued and outstanding: 47,161,942 at April 30, 2018 and 46,506,176 at July 31, 2017	472	465
Additional paid-in capital	330,517	328,294
Accumulated deficit	(246,457)	(241,900)
Accumulated other comprehensive income	1,847	2,013
Total stockholders' equity	86,379	88,872

Total liabilities and stockholders' equity	$ 105,451	$ 107,665

The accompanying notes are an integral part of these consolidated financial statements.

ENZO BIOCHEM, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS
(UNAUDITED)
(in thousands, except per share data)

	Three Months Ended April 30,		Nine Months Ended April 30,	
	2018	2017	2018	2017
Revenues:				
Clinical laboratory services	$18,137	$19,584	$58,001	$56,979
Product revenues	7,415	7,312	21,618	21,721
Royalty and license fee income	78	193	639	933
Total revenues	25,630	27,089	80,258	79,633
Operating costs and expenses:				
Cost of clinical laboratory services	10,995	11,334	34,767	33,282
Cost of product revenues	3,562	3,582	10,828	10,411
Research and development	799	766	2,358	2,071
Selling, general and administrative	11,025	10,534	32,986	33,246
Provision for uncollectible accounts receivable	396	620	1,989	1,968
Legal fee expense	1,651	512	3,782	1,254
Total operating costs and expenses	28,428	27,348	86,710	82,232
Operating loss	(2,798)	(259)	(6,452)	(2,599)
Other income (expense):				
Interest	227	115	569	240
Other	17	(74)	86	69
Foreign exchange gain (loss)	(462)	147	143	(308)
Loss before income taxes	(3,016)	(71)	(5,654)	(2,598)
Benefit for income taxes	—	—	1,097	—
Net loss	$(3,016)	$(71)	$(4,557)	$(2,598)
Net loss per common share:				
Basic and diluted	$(0.06)	$(0.00)	$(0.10)	$(0.06)
Weighted average common shares outstanding:				
Basic and diluted	47,073	46,367	46,895	46,310

The accompanying notes are an integral part of these consolidated financial statements.

ENZO BIOCHEM, INC.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(UNAUDITED)
(in thousands)

	Three Months Ended April 30,		Nine Months Ended April 30,	
	2018	2017	2018	2017
Net loss	$(3,016)	$(71)	$(4,557)	$(2,598)
Other comprehensive income (loss):				
Foreign currency translation adjustments	329	(116)	(166)	122
Comprehensive loss	$(2,687)	$(187)	$(4,723)	$(2,476)

The accompanying notes are an integral part of these consolidated financial statements.

ENZO BIOCHEM, INC.

CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY
Nine Months Ended April 30, 2018
(UNAUDITED)
(in thousands, except share data)

	Common Stock Shares Issued	Treasury Stock Shares	Common Stock Amount	Additional Paid-in Capital	Treasury Stock Amount	Accumulated Deficit	Accumulated Other Comprehensive Income	Total Stockholders' Equity
Balance at July 31, 2017	46,506,176	—	$ 465	$ 328,294	$ —	$ (241,900)	$ 2,013	$ 88,872
Net loss for the period ended April 30, 2018	—	—	—	—	—	(4,557)	—	(4,557)
Cashless options exercise	340,898	106,911	4	1,010	(1,014)	—	—	—
Vesting of restricted stock	2,562		—	—	—	—	—	—
Exercise of stock options	274,726	—	3	828	—	—	—	831
Share-based compensation charges	—	—	—	617	—	—	—	617
Issuance of common stock and treasury stock for employee 401(k) plan match	37,580	(106,911)	—	(232)	1,014	—	—	782
Foreign currency translation adjustments	—	—	—	—	—	—	(166)	(166)
Balance at April 30, 2018	47,161,942	—	$ 472	$ 330,517	$ —	$ (246,457)	$ 1,847	$ 86,379

The accompanying notes are an integral part of these consolidated financial statements

ENZO BIOCHEM, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS
(UNAUDITED)
(in thousands)

	Nine Months Ended April 30,	
	2018	2017
Cash flows from operating activities:		
Net loss	$(4,557)	$(2,598)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization of property, plant and equipment	1,608	1,552
Amortization of intangible assets	742	1,140
Provision for uncollectible accounts receivable	1,989	1,968
Share-based compensation charges	617	601
Accrual for share-based 401(k) employer match expense	630	552
Foreign exchange (gain) loss	(149)	267
Changes in operating assets and liabilities:		
Accounts receivable	(1,233)	(3,192)
Inventories	(257)	(213)
Prepaid expenses and other	513	195
Accounts payable – trade	(2,126)	(459)
Accrued liabilities, other current liabilities and other liabilities	2,846	(1,707)
Other assets	(1,098)	—
Total adjustments	4,082	704
Net cash used in operating activities	(475)	(1,894)
Cash flows from investing activities:		
Capital expenditures	(1,626)	(1,424)
Security deposits and other	(51)	6
Net cash used in investing activities	(1,677)	(1,418)
Cash flows from financing activities:		
Proceeds from borrowings under Credit Agreement	—	40,694
Repayments under Credit Agreement	—	(42,250)
Installment loan and capital lease obligation payments	(299)	(428)
Proceeds from exercise of stock options	831	159
Net cash provided by (used in) financing activities	532	(1,825)
Effect of exchange rate changes on cash and cash equivalents	9	(13)
Decrease in cash and cash equivalents	(1,611)	(5,150)
Cash and cash equivalents - beginning of period	64,167	67,777
Cash and cash equivalents - end of period	$62,556	$62,627

The accompanying notes are an integral part of these consolidated financial statements.

ENZO BIOCHEM, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

As of April 30, 2018
(Unaudited)
(Dollars in thousands, except share data)

Note 1 – Basis of Presentation

The accompanying consolidated financial statements include the accounts of Enzo Biochem, Inc. and its wholly-owned subsidiaries, Enzo Life Sciences, Enzo Clinical Labs, Enzo Therapeutics and Enzo Realty LLC, collectively or with one or more of its subsidiaries referred to as the "Company" or "Companies". The consolidated balance sheet as of April 30, 2018, the consolidated statements of operations and comprehensive income (loss) for the three and nine month ended April 30, 2018 and 2017, the consolidated statements of cash flows for the nine months ended April 30, 2018 and 2017 and the consolidated statement of stockholders' equity for the nine months ended April 30, 2018 (the "interim statements") are unaudited. In the opinion of management, all adjustments (which include normal recurring adjustments) necessary to present fairly the financial position and operating results for the interim periods have been made. Certain information and footnote disclosure, normally included in annual financial statements prepared in accordance with accounting principles generally accepted in the United States, have been condensed or omitted. The interim statements should be read in conjunction with the consolidated financial statements for the year ended July 31, 2017 and notes thereto contained in the Company's Annual Report on Form 10-K filed with the Securities and Exchange Commission. The consolidated balance sheet at July 31, 2017 has been derived from the audited financial statements at that date. The results of operations for the three and nine months ended April 30, 2018 are not necessarily indicative of the results that may be expected for the fiscal year ending July 31, 2018.

Effect of New Accounting Pronouncements

Recently Adopted Accounting Pronouncements

In March 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2016-09, *Improvements to Employee Share-Based Payment Accounting*, which requires all excess tax benefits or deficiencies to be recognized as income tax expense or benefit in the income statement. In addition, excess tax benefits should be classified along with other income tax cash flows as an operating activity in the statement of cash flows. We adopted this standard as of August 1, 2017. The adoption of this new standard did not have a material impact on our consolidated financial statements.

Pronouncements Issued but Not Yet Adopted

In May 2014, FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers: Topic 606*. ASU 2014-09 and its amendments supersede the current revenue recognition guidance, including industry-specific guidance. The core principle of the revenue recognition standard is to require an entity to recognize as revenue the amount that reflects the consideration which it expects to be entitled to in exchange for the goods or services it transfers control of to its customers.

The standard will be effective for our fiscal year beginning August 1, 2018 and its interim periods. We are not early adopting. We expect to use the full retrospective method upon adoption by applying the standard to each prior reporting period presented. We continue to evaluate the expected impact of the standard. Based on our preliminary assessment of the standard, we expect that the majority of the amounts that have historically been classified as bad debt expense, primarily related to patient responsibility, will be considered an implicit price concession in determining net revenues. Accordingly, we expect to report the estimate of uncollectible balances associated with patient responsibility as a reduction of the transaction price and therefore as a reduction in net revenues when historically these amounts were classified as bad debt expense within operating costs and expenses.

The adoption of this standard will also result in increased disclosure, including qualitative and quantitative disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from contracts from customers. However, the adoption of this standard is not expected to have a material impact on our financial position or cash flows.

In February 2016, FASB issued ASU No. 2016-02 – *Leases (Topic 842)*. The new standard establishes a right-of-use (ROU) model that requires a lessee to record a ROU asset and a lease liability on the balance sheet for all leases with terms longer than 12 months. Leases will be classified as either finance or operating, with classification affecting the pattern of expense recognition in the income statement. The new standard is effective for our fiscal year beginning August 1, 2019 including interim periods within that fiscal year. A modified retrospective transition approach is required for lessees for capital and operating leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements, with certain practical expedients available.

We believe the adoption of this standard would materially impact our consolidated financial statements by significantly increasing our non-current assets and non-current liabilities on our consolidated balance sheets if we record the right of use assets and related lease liabilities for our existing operating leases.

We will recognize expense in the consolidated statement of operations similar to current lease accounting, in the cost of sales and selling, general and administrative.

In June 2016, FASB issued ASU No. 2016-13 *Financial Instruments – Credit Losses (Topic 326)*. This standard changes the impairment model for most financial instruments, including trade receivables, from an incurred loss method to a new forward-looking approach, based on expected losses. The estimate of expected credit losses will require entities to incorporate considerations of historical information, current information and reasonable and supportable forecasts. Adoption of this standard is required for our annual and interim periods beginning August 1, 2020 and must be adopted using a modified retrospective transition approach. We are currently assessing the impact of the adoption of this standard on our results of operations, financial position and cash flows.

In May 2017, the FASB issued ASU 2017-09, *Compensation – Stock Compensation (Topic 708) Scope of Modification Accounting* which provides guidance about which changes to the terms or conditions of a share-based payment award require an entity to apply modification accounting in Topic 718. Adoption of this standard is required for our annual and interim periods beginning August 1, 2018 with the amendments in the update applied prospectively to an award modified on or after the adoption date.

In May 2018, the FASB issued ASU No. 2018-05, *Income Taxes (Topic 740): Amendments to SEC Paragraphs Pursuant to SEC Staff Accounting Bulletin No. 118*, regarding the accounting implications of the recently issued Tax Cuts and Jobs Act (the “Act”). This standard is effective immediately. The update clarifies that in a company’s financial statements that include the reporting period in which the Act was enacted, the company must first reflect the income tax effects of the Act in which the accounting under GAAP is complete. These amounts would not be provisional amounts. The company would also report provisional amounts for those specific income tax effects for which the accounting under GAAP is incomplete but a reasonable estimate can be determined. We have recorded a provisional amount which we believe is a reasonable estimate of the effects of the Act on our financial statements as of April 30, 2018. Technical corrections or other forthcoming guidance could change how we interpret provisions of the Act, which may impact our effective tax rate and could affect our deferred tax assets, tax positions and/or our tax liabilities.

We reviewed all other recently issued accounting pronouncements and have concluded they are not applicable or not expected to be significant to the accounting for our operations.

Certain prior period amounts have been reclassified to conform to the current period presentation. These reclassifications had no effect on the reported results of operations.

Concentration Risk

Other than the Medicare program, one provider whose programs are included in the “Third-party payers” and “Health Maintenance Organizations” (“HMO’s”) categories represents approximately 40% and 38% of the Clinical Labs segment net revenue for the three months ended April 30, 2018 and 2017 respectively, and 39% and 38% for the nine months ended April 30, 2018 and 2017, respectively.

Note 2 – Net income (loss) per share

Basic net income (loss) per share represents net income (loss) divided by the weighted average number of common shares outstanding during the period. As a result of the net loss for the three and nine months ended April 30, 2018 and 2017 diluted weighted average shares outstanding are the same as basic weighted average shares outstanding, and do not include the potential common shares from stock options and unvested restricted stock because to do so would be antidilutive.

For the three and nine months ended April 30, 2018, the number of potential common shares (“in the money options”) and unvested restricted stock excluded from the calculation of diluted earnings per share was 431,000 and 694,000, respectively, because their effect would be antidilutive. For the three and nine months ended April 30, 2017, approximately 987,000 and 865,000 weighted average stock options were excluded from the calculation of diluted weighted average shares outstanding because their effect would be antidilutive.

For the three and nine months ended April 30, 2018, the effect of approximately 581,000 and 194,000 of outstanding "out of the money" options to purchase common shares were excluded from the calculation of diluted net income per share because their effect would be anti-dilutive. For the three and nine months ended April 30, 2017, the effect of approximately zero and 165,000 of outstanding "out of the money" options to purchase common shares were excluded from the calculation of diluted net income per share because their effect would be anti-dilutive.

Note 3 - Supplemental disclosure for statement of cash flows

For the nine months ended April 30, 2018 and 2017, income taxes paid by the Company were $65 and $1,021, respectively.

For the nine months ended April 30, 2018 and 2017, interest paid by the Company was $61 and $99, respectively.

For the nine months ended April 30, 2018 and 2017, the Company financed $0 and $69 respectively, in machinery and transportation equipment under installment loans.

During the nine months ended April 30, 2018 certain officers of the Company exercised 340,898 stock options in non-cash transactions. The officers surrendered 106,911 shares of the Company's common stock to exercise the stock options. The Company recorded approximately $1,014, the market value of the surrendered shares, as treasury stock.

During the nine months ended April 30, 2018, the Company contributed its treasury stock and issued common stock in connection with its share-based 401(k) employer match in the amount of $782. For the 2017 period, the Company issue shares of common stock in the amount of $724.

Note 4 – Inventories

Inventories consist of the following:

	April 30, 2018	July 31, 2017
Raw materials	$817	$852
Work in process	2,065	1,905
Finished products	4,396	4,290
	$7,278	$7,047

Note 5 – Goodwill and intangible assets

At April 30, 2018 and July 31, 2017, the Company's carrying amount of goodwill, related to the Clinical Labs segment, is $7,452.

The Company's change in the carrying amount of intangible assets, all in the Life Sciences segment is as follows:

	Gross	**Accumulated Amortization**	**Net**
July 31, 2017	$27,436	$ (24,541)	$2,895
Amortization expense	—	(742)	(742)
Foreign currency translation	2	(6)	(4)
April 30, 2018	$27,438	$ (25,289)	$2,149

Intangible assets, all finite lived, consist of the following:

	April 30, 2018			**July 31, 2017**		
	Gross	Accumulated Amortization	Net	Gross	Accumulated Amortization	Net
Patents	$11,027	$ (10,971)	$56	$11,027	$ (10,951)	$76
Customer relationships	11,892	(9,799)	2,093	11,881	(9,083)	2,798
Website and acquired content	1,010	(1,010)	—	1,011	(1,011)	—
Licensed technology and other	492	(492)	—	484	(463)	21
Trademarks	3,017	(3,017)	—	3,033	(3,033)	—
Total	$27,438	$ (25,289)	$2,149	$27,436	$ (24,541)	$2,895

At April 30, 2018, information with respect to intangibles assets acquired is as follows:

	Useful life assigned	Weighted average remaining useful life
Customer relationships	8 -15 years	2.5 years
Other intangibles	10 years	1.5 years

At April 30, 2018, the weighted average remaining useful life of intangible assets is approximately two years.

Note 6 – Accrued Liabilities

Accrued liabilities consist of the following:

	April 30, 2018	July 31, 2017
Payroll, benefits, and commissions	$4,343	$4,092
Legal fee expense	2,401	599
Professional fees	764	442
Research and development	—	143
Other	2,287	1,444
	$9,795	$6,720

At April 30, 2018, other accrued liabilities primarily include $400 for a legal settlement.

Note 7 – Other Liabilities

Other liabilities consist of the following:

	April 30, 2018	July 31, 2017
Capital lease obligations, net of short term	$397	$551
Accrued legal settlement	—	410
Installment loans, net of short term	7	22

$404 $983

As of April 30, 2018, future minimum payments under the capital leases, net of interest of $75 aggregates $570 including a short term debt portion of $173 included in other current liabilities. Future minimum payments under the installment loans aggregate $44, including a short term portion of $37 included in other current liabilities.

Note 8 – Stockholders' Equity

Controlled Equity Offering

The Company has a Controlled Equity Offering℠ Sales Agreement (the "Sales Agreement") with Cantor Fitzgerald & Co., as sales agent ("Cantor"). Under the Sales Agreement, the Company may offer and sell, from time to time, through Cantor, shares of the Company's common stock, par value $0.01 per share (the "Common Stock"). The Company pays Cantor a commission of 3.0% of the aggregate gross proceeds received under the Sale Agreement. The Company is not obligated to make any sales of the shares under the Sales Agreement. The offering of shares pursuant to the Sales Agreement will terminate upon the earlier of (a) the sale of all of the shares subject to the Sales Agreement or (b) the termination of the Sales Agreement by Cantor or the Company, as permitted therein. The initial agreement contemplated the sale of shares of the Company's common stock having an aggregate offering price of up to $20.0 million. In December 2014, the Sales Agreement was amended in order for the Company to offer and sell additional shares of Common Stock having an aggregate offering price of $20.0 million.

On September 1, 2017, the Company filed with the SEC a "shelf" registration and sales agreement prospectus covering the offering, issuance and sale of our Common Stock that may be issued and sold under the existing Sales Agreement in an aggregate amount of up to $19.15 million. A total of $150 million of securities may be sold under this shelf registration, which was declared effective September 15, 2017.

During the nine months ended April 30, 2018 and during fiscal 2017, the Company did not sell any shares of Common Stock under the Sales Agreement.

Treasury stock

During the nine months ended April 30, 2018, certain officers of the Company exercised 340,898 stock options in non-cash transactions. The officers surrendered 106,911 shares of the Company's common stock to exercise the stock options. The Company recorded approximately $1,014, the market value of the surrendered shares, as treasury stock. All of the treasury shares were used in the share-based 401(k) employer match made during the nine months ended April 30, 2018.

Share-based compensation

The Company has an incentive stock option and restricted stock award plan (the "2005 Plan"), and a long term incentive share award plan, (the "2011 Plan"). The 2011 Incentive Plan, which is the only plan from which awards may be granted, provides for the award to eligible employees, officers, directors, consultants and other persons of stock options, stock appreciation rights (SARs), restricted stock, restricted stock units, performance awards, and other stock-based awards.

At the 2017 annual meeting, shareholders approved the amendment and restatement of the 2011 Plan, including an increase in the number of shares of common stock authorized for grant under the 2011 Plan, from 3 million shares to 5 million shares.

The amounts of share-based compensation expense recognized in the periods presented are as follows:

	Three months ended April 30,		Nine months ended April 30,	
	2018	2017	2018	2017
Stock options	$202	$204	$609	$586
Restricted stock	2	5	8	15
	$204	$209	$617	$601

The following table sets forth the amount of expense related to share-based payment arrangements included in specific line items in the accompanying statements of operations:

	Three months	Nine months

	ended April 30,		ended April 30,	
	2018	2017	2018	2017
Cost of clinical laboratory services	$—	$2	$—	$5
Selling, general and administrative	204	207	617	596
	$204	$209	$617	$601

No excess tax benefits were recognized during the nine month periods ended April 30, 2018 and 2017.

Stock Option Plans

The following table summarizes stock option activity during the nine month period ended April 30, 2018:

	Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value (000s)
Outstanding at July 31, 2017	2,130,995	$ 4.26		
Awarded	117,580	$ 8.36		
Exercised	(615,624)	$ 2.99		$ 5,896
Cancelled or expired	(29,334)	$ 5.94		
Outstanding at end of period	1,603,617	$ 5.02	2.6 years	$ 4,344
Exercisable at end of period	1,168,489	$ 4.25	1.2 years	$ 2,261

As of April 30, 2018, the total future compensation cost related to non-vested options, not yet recognized in the statements of operations, was $0.9 million and the weighted average period over which the remaining expense of these awards is expected to be recognized is fourteen months.

The intrinsic value of in the money stock option awards at the end of the period represents the Company's closing stock price on the last trading day of the period in excess of the exercise price multiplied by the number of options.

Restricted Stock Awards

A summary of the activity pursuant to the Company's unvested restricted stock awards for the nine months ended April 30, 2018 is as follows:

	Awards	Weighted Average Award Price
Outstanding at July 31, 2017	7,436	$ 4.45
Awarded	—	—
Vested	(2,562)	$ (5.51)
Forfeited	(386)	(5.62)
Unvested at end of period	4,488	$ 2.97

The fair value of a restricted stock award is determined based on the closing stock price on the award date. As of April 30, 2018, there was approximately $0.1 million of unrecognized compensation cost related to unvested restricted stock-based compensation to be recognized over a weighted average remaining period of approximately twenty-two months.

The fair value of the awards that vested during the nine months ended April 30, 2018 and 2017 was $22 and $19, respectively.

The total number of shares available for grant as equity awards from the 2011 Incentive Plan is approximately 2,266,800 shares as of April 30, 2018.

During the nine months ended April 30, 2018, the Company contributed $782 to match its employees' 401(k) contributions with 106,911 shares of treasury stock and by issuing 37,580 shares of its common stock, representing the fair value of the shares at the match date, and adjusted treasury stock, common stock and additional paid in capital by the same amount.

During the nine months ended April 30, 2017, the Company contributed $724 to match its employees' 401(k) contributions by issuing 91,541 shares of its common stock, representing the fair value of the shares at the match date,

and adjusted common stock and additional paid in capital by the same amount.

Note 9 – Income taxes

On December 22, 2017, legislation commonly known as the Tax Cuts and Jobs Act of 2017 (the "Act") was signed into law making significant changes to the Internal Revenue Code. Changes include, but are not limited to, a corporate tax rate decrease from 35% to 21% effective for tax years beginning after December 31, 2017, the transition of U.S international taxation from a worldwide tax system to a territorial system, and a one-time transition tax on the mandatory deemed repatriation of cumulative foreign earnings as of December 31, 2017.

The Company calculated its best estimate of the impact of the Act in accordance with its understanding of the Act and guidance available as of the date of this filing and recorded $1.1 million as an income tax benefit in the nine months ended April 30, 2018, the period in which the legislation was enacted, related to a credit for alternative minimum taxes (AMT) paid in prior periods. A provisional amount related to the remeasurement of certain deferred tax assets and liabilities based on the rates at which they are expected to reverse in the future was fully offset by an equivalent adjustment to the deferred tax valuation allowance. No provisional amount related to the one-time transition tax on the mandatory deemed repatriation of foreign earnings was deemed necessary.

On December 22, 2017, Staff Accounting Bulletin No. 118 ("SAB 118") was issued to address the application of US GAAP in situations when a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Act. In accordance with SAB 118, the Company has determined that the $1.1 million income tax benefit, which relates to the AMT credit, is a provisional amount and a reasonable estimate at April 30, 2018.

The Company's effective tax rate benefit for the three and nine months ended April 30, 2018 was zero and 24.1%, respectfully and was based on the refundable federal AMT credit. There was no tax provision or benefit for the 2017 periods. The Company's effective tax rate for all periods differed from the expected net operating loss carryforward benefit at the U.S. federal statutory rate primarily due to the inability to recognize such benefit. The carryforward

benefit cannot be recognized because of uncertainties relating to future taxable income in terms of both its timing and its sufficiency, which would enable the Company to realize the federal carryforward benefit.

Note 10 – Segment reporting

The Company has three reportable segments: Clinical Labs, Life Sciences, and Therapeutics. The Clinical Labs segment provides diagnostic services to the health care community. The Life Sciences segment develops, manufactures, and markets products to research and pharmaceutical customers. The Therapeutic segment conducts research and development activities for therapeutic drug candidates.

The Company evaluates segment performance based on segment income (loss) before taxes. Costs excluded from segment income (loss) before taxes and reported as “Other” consist of corporate general and administrative costs which are not allocable to the three reportable segments. Legal fee expense incurred to defend the Company’s intellectual property and other general corporate matters is considered a component of the Other segment. Legal fee expense specific to other segments’ activities has been allocated to those segments. When recognized, legal settlements, net represents activities for which royalties would have been received by the Company’s Life Sciences segment had the Company had agreements in place with plaintiffs for the patents or products covered by the settlements.

Management of the Company assesses assets on a consolidated basis only and, therefore, assets by reportable segment have not been included in the reportable segments below. The accounting policies of the reportable segments are the same as those described in the summary of significant accounting policies contained in the Company’s Annual Report on Form 10-K for the year ended July 31, 2017.

The following financial information represents the operating results of the reportable segments of the Company:

Three months ended April 30, 2018

	Clinical Labs	Life Sciences	Therapeutics	Other	Consolidated
Revenues:					
Clinical laboratory services	$18,137	—	—	—	$ 18,137
Product revenues	—	$ 7,415	—	—	7,415
Royalty and license fee income	—	78	—	—	78
	18,137	7,493	—	—	25,630
Operating costs and expenses:					
Cost of clinical laboratory services	10,995	—	—	—	10,995
Cost of product revenues	—	3,562	—	—	3,562
Research and development	—	576	$ 223	—	799
Selling, general and administrative	6,252	2,974	—	$1,799	11,025
Provision for uncollectible accounts receivable	400	(4)	—	—	396
Legal fee expense	25	19	—	1,607	1,651
Total operating costs and expenses	17,672	7,127	223	3,406	28,428
Operating income (loss)	465	366	(223)	(3,406)	(2,798)
Other income (expense):					
Interest	(22)	12	—	237	227
Other	15	2	—	—	17
Foreign exchange loss	—	(462)	—	—	(462)
Income (loss) before income taxes	$458	$ (82)	$ (223)	$(3,169)	$ (3,016)
Depreciation and amortization included above	$437	$ 358	$ —	$20	$ 815
Share-based compensation included in above:					
Selling, general and administrative	26	$ 17	—	$161	204
Total	$26	$ 17	$ —	$161	$ 204
Capital expenditures	$465	$ 96	$ —	$—	$ 561

Three months ended April 30, 2017

	Clinical Labs	Life Sciences	Therapeutics	Other	Consolidated
Revenues:					
Clinical laboratory services	$19,584	—	—	—	$ 19,584
Product revenues	—	$ 7,312	—	—	7,312
Royalty and license fee income	—	193	—	—	193
	19,584	7,505	—	—	27,089
Operating costs and expenses:					
Cost of clinical laboratory services	11,334	—	—	—	11,334
Cost of product revenues	—	3,582	—	—	3,582
Research and development	—	552	$ 214	—	766
Selling, general and administrative	6,118	2,745	—	$1,671	10,534
Provision for uncollectible accounts receivable	650	(30)	—	—	620
Legal fee expense	4	42	—	466	512
Total operating costs and expenses	18,106	6,891	214	2,137	27,348
Operating income (loss)	1,478	614	(214)	(2,137)	(259)
Other income (expense):					
Interest	(28)	12	—	131	115
Other	7	(98)	—	17	(74)
Foreign exchange gain	—	147	—	—	147
Income (loss) before income taxes	$1,457	$ 675	$ (214)	$(1,989)	$ (71)
Depreciation and amortization included above	$390	$ 423	$ —	$37	$ 850
Share-based compensation included in above:					
Cost of clinical laboratory services	$2	—	—	—	$ 2
Selling, general and administrative	38	$ 23	—	$146	207
Total	$40	$ 23	$ —	$146	$ 209
Capital expenditures	$483	$ 252	$ —	$—	$ 735

Nine months ended April 30, 2018

	Clinical Labs	Life Sciences	Therapeutics	Other	Consolidated
Revenues:					
Clinical laboratory services	$58,001	—	—	—	$ 58,001
Product revenues	—	$21,618	—	—	21,618
Royalty and license fee income	—	639	—	—	639
	58,001	22,257	—	—	80,258
Operating costs and expenses:					
Cost of clinical laboratory services	34,767	—	—	—	34,767
Cost of product revenues	—	10,828	—	—	10,828
Research and development	—	1,690	$ 668	—	2,358
Selling, general and administrative	18,454	8,487	—	$6,045	32,986
Provision for uncollectible accounts receivable	2,000	(11)	—	—	1,989
Legal fee expense	46	47	—	3,689	3,782
Total operating costs and expenses	55,267	21,041	668	9,734	86,710
Operating income (loss)	2,734	1,216	(668)	(9,734)	(6,452)
Other income (expense):					
Interest	(70)	35	—	604	569
Other	32	10	—	44	86
Foreign exchange gain	—	143	—	—	143
Income (loss) before income taxes	$2,696	$1,404	$ (668)	$(9,086)	$ (5,654)
Depreciation and amortization included above	$1,254	$1,039	$ —	$57	$ 2,350
Share-based compensation included in above:					
Selling, general and administrative	86	$61	—	$470	617
Total	$86	$61	$ —	$470	$ 617
Capital expenditures	$1,459	$167	$ —	$—	$ 1,626

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Nine months ended April 30, 2017

	Clinical Labs	Life Sciences	Therapeutics	Other	Consolidated
Revenues:					
Clinical laboratory services	$56,979	—	—	—	$ 56,979
Product revenues	—	$21,721	—	—	21,721
Royalty and license fee income	—	933	—	—	933
	56,979	22,654	—	—	79,633
Operating costs and expenses:					
Cost of clinical laboratory services	33,282	—	—	—	33,282
Cost of product revenues	—	10,411	—	—	10,411
Research and development	—	1,695	$ 376	—	2,071
Selling, general and administrative	17,967	8,596	—	$6,683	33,246
Provision for uncollectible accounts receivable	1,910	58	—	—	1,968
Legal fee expense	105	70	—	1,079	1,254
Total operating costs and expenses	53,264	20,830	376	7,762	82,232
Operating income (loss)	3,715	1,824	(376)	(7,657)	(2,599)
Other income (expense):					
Interest	(85)	34	—	291	240
Other	126	(98)	—	41	69
Foreign exchange loss	—	(308)	—	—	(308)
Income (loss) before income taxes	$3,756	$1,452	$ (376)	$(7,430)	$ (2,598)
Depreciation and amortization included above	$1,185	$1,432	$ —	$75	$ 2,692
Share-based compensation included in above:					
Cost of clinical laboratory services	$5	—	—	—	$ 5
Selling, general and administrative	74	$49	—	$473	596
Total	$79	$49	$ —	$473	$ 601
Capital expenditures	$1,070	$354	$ —	$—	$ 1,424

Note 11 – Contingencies

The Company is engaged in litigation in the United States District Court for the Southern District of New York against Roche Diagnostic GmbH and its related company Roche Molecular Systems, Inc. ("Roche"), as declaratory judgment defendant. This case was commenced in May 2004. Roche seeks a declaratory judgment of non-breach of contract and patent invalidity against the Company. Roche has also asserted tort claims against the Company. The Company has asserted breach of contract and patent infringement causes of action against Roche. There has been extensive discovery in the case. In 2011, Roche moved for summary judgment of non-infringement regarding the Company's patent claims. In 2012, the motion was granted in part and denied in part. In December 2012, Roche moved for summary judgment on the Company's non-patent claims. Additional discovery was taken and the Company responded to the motions in May 2013. In December 2013, the Court granted in part and denied in part Roche's summary judgment motion. In October 2014, the Court ordered that damages discovery concerning the Company's remaining contract and patent claims and Roche's claims should be completed by the end of January 2015, and expert discovery should be completed following the Court's not-yet-issued claim construction ruling concerning the Company's patent infringement claim against Roche. Roche dropped its tort claims during damages discovery. On October 2, 2017, the Court issued its claim construction ruling. On May 11, 2018, the Court issued a revised scheduling order which required the completion of expert discovery by July 13, 2018 and scheduled a conference on August 17, 2018 that will function as a pre-trial conference or a pre-motion conference. The Company and Enzo Life Sciences intend to vigorously press their remaining claims and contest the claims against them.

There are seven pending cases originally brought by the Company in the United States District Court for the District of Delaware ("the Court") alleging patent infringement against various companies. On June 28, 2017, the Court issued an opinion in the Gen-Probe case, granting Gen-Probe's motion for summary judgment that the asserted claims of the '180 patent are invalid for nonenablement. The Court entered final judgment of invalidity of the asserted claims of the '180 patent on July 19, 2017 in the Gen-Probe and Hologic cases. The Court entered partial final judgment of invalidity of the asserted claims of the '180 patent and stayed the remainder of the cases in the Becton Dickinson and Roche cases on July 31, 2017 and August 2, 2017, respectively. The Company filed notices of appeal in each of the Gen-Probe, Hologic, Becton Dickinson, and Roche cases, which were docketed by the United States Court of Appeals for the Federal Circuit ("Federal Circuit"). In the Abbott case, the parties agreed that the Court's summary judgment ruling in the Gen-Probe case invalidated all of the '180 patent claims asserted against the Abbott Defendants. On August 15, 2017, the Court granted Abbott's motion for summary judgment that the asserted claims of the '405 patent are invalid for nonenablement. On September 1, 2017, the Court entered final judgment of invalidity of the asserted claims of the '180 and '405 patents for nonenablement in the Abbott case. Enzo subsequently filed a notice of appeal in the Abbott case on September 14, 2017. The Federal Circuit docketed the appeal on September 15, 2017. The Federal Circuit consolidated the appeals from the Abbott, Becton Dickinson, Gen-Probe, Hologic, and Roche litigations ("Consolidated Appeals"). We disagree with the Court's invalidity decisions regarding the '180 and '405 patents in the pending cases as set forth in our opening brief in the Consolidated Appeals pending in the Federal Circuit filed on November 28, 2017. In the Consolidated Appeals, we have asked the Federal Circuit to reverse the Court's grants of final and summary judgment of invalidity of the asserted claims of the '180 and '405 patents and to remand the cases against Abbott, Becton Dickinson, Gen-Probe, Hologic, and Roche to the Court. Briefing is now complete in the Consolidated Appeals. The parties await the Federal Circuit's scheduling of an oral argument date for the Consolidated Appeals. In the other two cases involving Hologic, one of the cases is stayed (Hologic II), while the other case (Hologic III) that involves the '581 patent is proceeding under the Court's scheduling order with fact and expert discovery deadlines through September 2018, a summary judgment hearing date in April 2019, and a trial date in September 2019. In Hologic III, the Court granted Enzo's motion to amend its complaint to add two new defendants, Grifols Diagnostic Solutions, Inc. and Grifols, S.A, to that case. Grifols, S.A. has moved to dismiss for lack of personal jurisdiction; briefing on that motion is complete but the Court has not set a date for oral argument.

The parties have completed claim construction briefing, and a claim construction hearing is scheduled for July 2, 2018. Regarding Hologic's petition requesting institution of an *inter partes* review proceeding regarding the U.S Patent No. 6,221,581 ("the '581 patent") filed with the United States Patent and Trademark Office ("PTO"), the Patent Trial and Appeals Board ("the Board") denied institution of Hologic's petition on April 18, 2018. On May 18, 2018, Hologic filed with the Board a request for rehearing of the order denying institution of inter partes review of the '581 patent. Enzo has requested permission to file a brief in response to Hologic's request for rehearing.

There can be no assurance that the Company will be successful in these litigations. Even if the Company is not successful, management does not believe that there will be a significant adverse monetary impact on the Company.

The Company is party to other claims, legal actions, complaints, and contractual disputes that arise in the ordinary course of business. The Company believes that any liability that may ultimately result from the resolution of these matters will not, individually or in the aggregate, have a material adverse effect on its financial position or results of operations.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and related notes and other information included elsewhere in this Quarterly Report on Form 10-Q.

Forward-Looking Statements

Our disclosure and analysis in this report, including but not limited to the information discussed in this Item 2, contain forward-looking information about our Company's financial results and estimates, business prospects and products in research and development that involve substantial risks and uncertainties. From time to time, we also may provide oral or written forward-looking statements in other materials we release to the public. Forward-looking statements give our current expectations or forecasts of future events. You can identify these statements by the fact that they do not relate strictly to historic or current facts. They use words such as "anticipate", "estimate", "expect", "project", "intend", "plan", "beli "will", and other words and terms of similar meaning in connection with any discussion of future operations or financial performance.

In particular, these include statements relating to future actions, prospective products or product approvals, future performance or results of current and anticipated products, sales efforts, expenses, interest rates, foreign currency rates, intellectual property matters, the outcome of contingencies, such as legal proceedings, and financial results. We cannot guarantee that any forward-looking statement will be realized, although we believe we have been prudent in our plans and assumptions. Achievement of future results is subject to risks, uncertainties and inaccurate assumptions. Should known or unknown risks or uncertainties materialize, or should underlying assumptions prove inaccurate, actual results could vary materially from past results and those anticipated, estimated or projected. As a result, investors are cautioned not to place undue reliance on any of our forward-looking statements. Investors should bear this in mind as they consider forward-looking statements. We do not assume any obligation to update or revise any forward-looking statement that we make, even if new information becomes available or other events occur in the future. We are also affected by other factors that may be identified from time to time in our filings with the Securities and Exchange Commission, some of which are set forth in Item 1A - Risk Factors in our Form 10-K filing for the July 31, 2017 fiscal year. You are advised to consult any further disclosures we make on related subjects in our Forms 10-Q, 8-K and 10-K reports to the Securities and Exchange Commission. Although we have attempted to provide a list of important factors which may affect our business, investors are cautioned that other factors may prove to be important in the future and could affect our operating results.

You should understand that it is not possible to predict or identify all such factors or to assess the impact of each factor or combination of factors on our business. Consequently, you should not consider any such list to be a complete set of all potential risks or uncertainties.

Overview

Enzo Biochem, Inc. (the “Company” “we”, “our” or “Enzo”) is an integrated diagnostic bioscience company focusing on delivering and applying advanced technology capabilities to produce affordable reliable products and services to allow our customers to meet their clinical needs. We develop, manufacture and sell our proprietary technology solutions and platforms to clinical laboratories, specialty clinics and researchers and physicians globally. Enzo’s structure and business strategy represent the culmination of years of extensive planning and work. The Company now has the unique ability to offer low cost, high performance products and services in molecular diagnostics, which ideally positions it to capitalize on the reimbursement pressures facing diagnostic labs. Our pioneering work in genomic analysis coupled with our extensive patent estate and enabling platforms have positioned the Company to continue to play an important role in the rapidly growing molecular medicine marketplaces.

Enzo technology solutions and platforms and unique operational structure are designed to reduce overall healthcare costs for both government and private insurers. Our proprietary technology platforms reduces our customers’ need for multiple, specialized instruments, and offer a variety of high throughput capabilities together with a demonstrated high level of accuracy and reproducibility. Our genetic test panels are focused on large and growing markets primarily in the areas of personalized medicine, women’s health, infectious diseases and genetic disorders.

For example, our AMPIPROBE® technology platform can lead to the development of an entire line of nucleic acid clinical products that can allow laboratories to offer a complete menu of services at a cost that allows them to enjoy an acceptable margin. Our technology solutions provide tools to physicians, clinicians and other health care providers to improve detection, treatment and monitoring of a broad spectrum of diseases and conditions. In addition, reduced patient to physician office visits translates into lower healthcare processing costs and greater patient services.

In the course of our research and development activities, we have built a substantial portfolio of intellectual property assets, comprised of 336 issued patents worldwide, and over 151 pending patent applications, along with extensive enabling technologies and platforms.

Below are brief descriptions of each of our operating segments (See Note 10 in the Notes to Consolidated Financial Statements):

Enzo Clinical Labs is a clinical reference laboratory providing a wide range of clinical services to physicians, medical centers, other clinical labs and pharmaceutical companies. The Company believes having a CLIA-certified and a College of American Pathologists ("CAP") accredited medical laboratory located in New York provides us the opportunity to more rapidly introduce cutting edge products and services to the clinical marketplace. Enzo Clinical Labs offers an extensive menu of molecular and other clinical laboratory tests and procedures used in patient care by physicians to establish or support a diagnosis, monitor treatment or medication, and search for an otherwise undiagnosed condition. Our laboratory is equipped with state-of-the-art communication and connectivity solutions enabling the rapid transmission, analysis and interpretation of generated data. We operate a full service clinical laboratory in Farmingdale, New York, a network of over 30 patient service centers throughout New York, New Jersey and expanding into Connecticut, a free standing "STAT" or rapid response laboratory in New York City and a full service phlebotomy, in-house logistics department, and an information technology department. Given our license in New York State, we are able to offer testing services to clinical laboratories and physicians in the majority of states nationwide.

Enzo Life Sciences manufactures, develops and markets products and tools to clinical research, drug development and bioscience research customers worldwide. Underpinned by broad technological capabilities, Enzo Life Sciences has developed proprietary products used in the identification of genomic information by laboratories around the world. Information regarding our technologies can be found in the "Core Technologies" section (See Form 10K for the fiscal year ended July, 31, 2017). We are internationally recognized and acknowledged as a leader in the development, manufacturing validation and commercialization of numerous products serving not only the clinical research market but life sciences researchers in the fields of cellular analysis and drug discovery, among others. Our operations are supported by global operations allowing for the efficient marketing and delivery of our products around the world.

Enzo Therapeutics is a biopharmaceutical venture that has developed multiple novel approaches in the areas of gastrointestinal, infectious, ophthalmic and metabolic diseases, many of which are derived from the pioneering work of Enzo Life Sciences. Enzo Therapeutics has focused its efforts on developing treatment regimens for diseases and conditions for which current treatment options are ineffective, costly, and/or cause unwanted side effects. This focus has generated a clinical and preclinical pipeline, as well as more than 101 patents and patent applications.

Results of Operations

Three months ended April 30, 2018 compared to April 30, 2017
(in 000s)

Comparative Financial Data for the Three Months Ended April 30,

	2018	2017	Increase (Decrease)	% Change
Revenues:				
Clinical laboratory services	$18,137	$19,584	$ (1,447)	(7)
Product revenues	7,415	7,312	103	1
Royalty and license fee income	78	193	(115)	(60)
Total revenues	25,630	27,089	(1,459)	(5)
Operating costs and expenses:				
Cost of clinical laboratory services	10,995	11,334	(339)	(3)
Cost of product revenues	3,562	3,582	(20)	(1)
Research and development	799	766	33	4
Selling, general and administrative	11,025	10,534	491	5
Provision for uncollectible accounts receivable	396	620	(224)	(36)
Legal fee expense	1,651	512	1,139	222
Total operating costs and expenses	28,428	27,348	1,080	4
Operating loss	(2,798)	(259)	(2,539)	**
Other income (expense):				
Interest	227	115	112	97
Other	17	(74)	91	**
Foreign currency gain (loss)	(462)	147	(609)	**
Loss before income taxes	$(3,016)	$(71)	$ (2,945)	**

****not meaningful**

Consolidated Results:

The “2018 period” and the “2017 period” refer to the three months ended April 30, 2018 and 2017, respectively.

Clinical laboratory services revenues for the 2018 period were $18.1 million compared to $19.6 million in the 2017 period, a decrease of $1.5 million or 7%. Services revenue was impacted by the loss of a large medical practice that internalized approximately $1.9 million of genetic testing ordering, storm related weather in the Northeast which

impacted operations by approximately $1.0 million, and by an accounts receivable reserve adjustment of approximately $0.5 million due to a commercial payer payment practice. These impacts were partially offset by an increase in core service testing volume of nearly 2% or $2.0 million from growth in genetic and esoteric testing.

Product revenues for the 2018 period were $7.4 million compared to $7.3 million in the 2017 period, an increase of $0.1 million or 1%. The increase resulted from the positive impact of foreign currency translation of $0.2 million, which was partially offset by lower product order volume of $0.1 million in the United States due to lower research funding.

The cost of clinical laboratory services during the 2018 period was $11.0 million as compared to $11.3 million in the 2017 period, a decrease of $0.3 million or 3% due to a decrease in outside reference lab testing of $1.0 million, partially offset by increases in salary expenses of $0.4 million, reagent costs of $0.2 million, and depreciation, repair and maintenance costs of $0.1 million. Gross profit margin was 39.4% in the 2018 period and 42% in the 2017 period and was impacted by the mix of tests and an increase in contractual allowances.

The cost of product revenues was $3.6 million in both the 2018 and 2017 periods. Due to a more profitable mix of products sold, the gross profit margin on products was 52% in the 2018 period and 51% in the 2017 period.

Research and development expenses were $0.8 million in both the 2018 and 2017 periods. The expense for the Life Sciences segment was $0.6 million and $0.2 million for the Therapeutics segment in both periods.

Selling, general and administrative expenses were approximately $11.0 million during the 2018 period versus $10.5 million during the 2017 period, an increase of $0.5 million or 5%. The Clinical Lab segment expense increased $0.1 million, primarily comprised of billing and collection expenses. The Life Sciences segment expense increased $0.2 million due to increases in marketing headcount. The Other segment expense increased $0.2 million from an increase in benefits expense.

The provision for uncollectible accounts receivable, primarily related to the Clinical Labs segment, was approximately $0.4 million in the 2018 period and $0.6 million in the 2017 period, a decrease of approximately $0.2 million. As a percentage of Clinical laboratory services, the provision for uncollectible accounts receivable relating to the Clinical Labs segment was 2.2% in the 2018 period and 3.3% in the 2017 period.

Legal fee expense was $1.7 million during the 2018 period compared to $0.5 million in the 2017 period, an increase of $1.1 million or 222% due to the timing of legal activity and related costs associated with on-going litigation and contract dispute where the Company is the plaintiff.

Segment Results:

Clinical Labs

Revenues from laboratory services for the 2018 period were $18.1 million compared to $19.5 million in the 2017 period. The decrease of $1.4 million or 7% is attributed to the loss of a large medical practice that internalized its genetic testing ordering, storm related weather in the Northeast, and by an accounts receivable reserve adjustment due to a commercial payer payment practice. These impacts were partially offset by an increase in core service testing volume from growth in genetic and esoteric testing. Cost of services during the 2018 period was $11.0 million as compared to $11.3 million in the 2017 period, a decrease of $0.3 million or 3% due lower costs associated with outside reference lab testing, which was partially offset by higher salary, reagent and equipment related costs. Gross profit margin was 39.4% in the 2018 period and 42% in the 2017 period and was impacted by the mix of tests and an increase in contractual allowances. Selling, general and administrative expenses increased $0.1 million for billing and collection costs. As a percentage of revenues, the provision for uncollectable accounts, primarily for self-pay patient accounts, was 2.2% for the 2018 period and 3.3% for the 2017 period. Income before taxes was $0.5 million for 2018 period as compared to $1.5 million in the 2017 period, a decrease of $1.0 million as a result of lower revenues.

Life Sciences

Product revenues for the 2018 period were $7.4 million compared to $7.3 million in the 2017 period, an increase of $0.1 million or 1%. The increase resulted from the positive impact of foreign currency translation of $0.2 million, which was partially offset by lower product order volume of $0.1 million in the United States due to lower research funding. The segment's gross profit was $3.9 million in both the 2018 and 2017 periods. The gross profit margin on products was 52% in the 2018 period and 51% in the 2017 period and was positively impacted by slightly lower price discounting. Selling general and administrative (SG&A) expenses increased $0.2 million for marketing costs. Research and development expense in both periods was $0.6 million. Due to significant depreciation of foreign currencies versus the US dollar at the end of the 2018 period compared to the start of the 2018 period, in particular the Swiss franc, British pound and Euro, the foreign currency loss was $0.5 million compared to a gain of $0.1 million in the 2017 period, an unfavorable change of $0.6 million. The 2018 period loss before taxes was $0.1 million for as compared to income before taxes of $0.7 million for the 2017 period, a decrease of $0.8 million, the result of the foreign currency loss and increase in SG&A.

Therapeutics

The Therapeutics segment's operating loss before income taxes was approximately $0.2 million in both the 2018 and 2017 periods.

Other

The Other segment's loss before taxes for the 2018 period was approximately $3.2 million compared to $2.0 million for the 2017 period, an increase of $1.2 million. The 2018 period legal expense associated with on-going litigation and contract dispute increased $1.1 million. Compensation and benefits related expenses increased $0.2 million. Interest income increased $0.1 million due to the impact of a higher interest rate earned on cash and cash equivalents during the 2018 period compared to 2017.

Results of Operations

Nine months ended April 30, 2018 compared to April 30, 2017
(in 000s)

Comparative Financial Data for the Nine Months Ended April 30,

	2018	2017	Increase (Decrease)	% Change
Revenues:				
Clinical laboratory services	$58,001	$56,979	$ 1,022	2
Product revenues	21,618	21,721	(103)	**
Royalty and license fee income	639	933	(294)	(32)
Total revenues	80,258	79,633	625	1
Operating costs and expenses:				
Cost of clinical laboratory services	34,767	33,282	1,485	4
Cost of product revenues	10,828	10,411	417	4
Research and development	2,358	2,071	287	14
Selling, general and administrative	32,986	33,246	(260)	(1)
Provision for uncollectible accounts receivable	1,989	1,968	21	1
Legal fee expense	3,782	1,254	2,528	202
Total operating costs and expenses	86,710	82,232	4,478	5
Operating loss	(6,452)	(2,599)	(3,853)	**
Other income (expense):				
Interest	569	240	329	**
Other	86	69	17	25
Foreign currency gain (loss)	143	(308)	451	**
Loss before income taxes	$(5,654)	$(2,598)	$ (3,056)	(118)

****not meaningful**

Consolidated Results:

The “2018 period” and the “2017 period” refer to the nine months ended April 30, 2018 and 2017, respectively.

Clinical laboratory services revenues for the 2018 period were $58.0 million compared to $57.0 million in the 2017 period, an increase of $1.0 million or 2%. The increase is attributed to an increase in core service testing volume from growth in genetic and esoteric testing, partially offset by the loss of a large medical practice that internalized its genetic testing ordering, storm related weather in the Northeast, and by an accounts receivable reserve adjustment due to a commercial payer payment practice.

Product revenues for the 2018 period were $21.6 million compared to $21.7 million in the 2017 period, a decrease of $0.1 million or less than 1%. The decrease resulted from lower product order volume of $0.6 million, primarily due to lower research funding and lower pricing due to competition in the United States, which was partially offset by the positive impact of foreign currency translation of $0.5 million.

The cost of clinical laboratory services during the 2018 period was $34.8 million as compared to $33.3 million in the 2017 period, an increase of $1.5 million or 4% due to the volume increase in clinical laboratory services, and is comprised of $1.0 million for reagents, $1.1 million in salary expenses and $0.2 million of depreciation, repair and maintenance costs, partially offset by a decrease of $0.8 million for outside reference lab testing costs due to lower molecular testing levels. Gross profit margin was 40.1% in the 2018 period and 41.6% in the 2017 period, impacted by the mix of tests.

The cost of product revenues was $10.8 million in the 2018 period and $10.4 million in the 2017 period, an increase of $0.4 million or 4% due to the sale of lower margin items. The gross profit margin on products was 50% in the 2018 period and 52% in the 2017 period, and was also negatively impacted by lower pricing due to competition.

Research and development expenses were $2.4 million versus $2.1 million in the 2018 period, an increase of $0.3 million or 14%. The expense for the Life Sciences segment was $1.7 million in both periods. The expense for the Therapeutics segment was $0.7 million in the 2018 period and $0.4 million in the 2017 period. The lower expense in the 2017 period was due to the impact of an adjustment decreasing an obligation for clinical trial activity.

Selling, general and administrative expenses were approximately $33.0 million during the 2018 period versus $33.2 million during the 2017 period, a decrease of $0.2 million or 1%. The Clinical Lab segment expense increased $0.5 million comprised of a $0.6 million increase in billing and collection expenses and a $0.1 million increase in salaries, partially offset by a decrease of $0.2 million in office materials. The Life Sciences segment expense decreased $0.1 million due to lower compensation. The Other segment expense decreased $0.6 million, comprised of a decrease in compensation related expenses of $0.5 million and a decrease of $0.1 million in office expenses.

The provision for uncollectible accounts receivable, primarily related to the Clinical Labs segment, was approximately $2.0 million in both the 2018 and 2017 periods. As a percentage of Clinical laboratory services, the provision for uncollectible accounts receivable relating to the Clinical Labs segment was 3.4% in both the 2018 and 2017 periods.

Legal fee expense was $3.8 million during the 2018 period compared to $1.3 million in the 2017 period, an increase of $2.5 million or 202% due to the timing of legal activity and related costs associated with on-going litigation and contract dispute where the Company is the plaintiff.

Segment Results:

Clinical Labs

Revenue from laboratory services for the 2018 period were $58.0 million compared to $57.0 million in the 2017 period. The increase of $1.0 million or 2% is attributed to an increase in core service testing volume from growth in genetic and esoteric testing, partially offset by the loss of a large medical practice that internalized its genetic testing ordering, storm related weather in the Northeast, and by an accounts receivable reserve adjustment due to a commercial payer payment practice. Cost of services during the 2018 period was $34.8 million as compared to $33.3 million in the 2017 period, an increase of $1.5 million or 4% due to the volume increase in clinical laboratory services, and is comprised of $1.0 million for reagents, $1.1 million in salary expenses and $0.2 million of depreciation, repair and maintenance costs, partially offset by a decrease of $0.8 million for outside reference lab testing costs relating to molecular testing levels. Gross profit margin was 40.1% in the 2018 period and 41.6% in the 2017 period and was impacted by the mix of tests and an increase in contractual allowances. As a percentage of revenues, the provision for uncollectable accounts, primarily for self-pay patient accounts, was 3.4% for both the 2018 and 2017 periods. Income before taxes was $2.7 million for 2018 period as compared to $3.8 million in the 2017 period, a decrease of $1.1 million.

Life Sciences

Product revenues for the 2018 period were $21.6 million compared to $21.7 million in the 2017 period, a decrease of $0.1 million or less than 1%. The decrease resulted from lower product order volume of $0.6 million, primarily in the United States due to lower research funding and lower pricing due to competition, which was partially offset by the positive impact of foreign currency translation of $0.5 million. The segment's gross profit was $11.4 million in the 2018 period and $12.2 million in the 2017 period. The gross profit margin on products was 50% in the 2018 period and 52% in the 2017 period and was negatively impacted by the sale of lower margin products and price discounting. In the 2018 period, selling general and administrative expenses decreased $0.1 million compared to the 2017 period. Due to nearly offsetting impacts of the depreciation of the Swiss franc and the appreciation of the British pound and Euro versus the US dollar at the end of the 2018 period compared to the start of the 2018 period, the foreign currency gain was $0.1 million compared to a loss of $0.3 million in the 2017 period, a favorable change of $0.4 million. Income before taxes was $1.4 million for both the 2018 and 2017 periods.

Therapeutics

The Therapeutics segment's operating loss before income taxes was approximately $0.7 million in the 2018 period and $0.4 million in the 2017 period. The lower expense during the 2017 period was due to the impact of an adjustment decreasing an obligation for clinical trial activity.

Other

The Other segment's loss before taxes for the 2018 period was approximately $9.1 million compared to $7.4 million for the 2017 period, an increase of $1.7 million. During the 2018 period, legal fee expense associated with on-going

litigation and contract dispute increased $2.6 million. The 2018 period selling general and administrative expense declined $0.6 million compared to the 2017 period due to a $0.5 million decrease in compensation related expenses and a $0.1 million decrease in office expense. Interest income increased $0.3 million in the 2018 period due to the impact of a higher interest rate earned on cash and cash equivalents and because of interest expense incurred in the 2017 period on the then outstanding loan payable. The loan was repaid during the second quarter of 2017 period.

Liquidity and Capital Resources

At April 30, 2018, the Company had cash and cash equivalents of $62.6 million of which $0.6 million was in foreign accounts, as compared to cash and cash equivalents of $64.2 million, of which $0.5 million was in foreign accounts at July 31, 2017. It is the Company's current intent to permanently reinvest these funds outside of the United States, and its current plans do not demonstrate a need to repatriate them to fund its United States operations. The Company had working capital of $67.8 million at April 30, 2018 compared to $71.3 million at July 31, 2017. The decrease in working capital of $3.5 million was primarily due to the period loss and net changes in operating assets and liabilities.

Net cash used in operating activities during the 2018 period was approximately $0.5 million as compared to cash used in operating activities of $1.9 million during the 2017 period, a decrease of approximately $1.4 million. The decrease is due to a net change in assets and liabilities of $4.0 million offset by an increase in net loss of $2.0 million and a $0.6 million change in non-cash adjustments.

Net cash used in investing activities in fiscal 2018 and 2017 was approximately $1.7 million and $1.4 million, respective, which consists primarily of capital expenditures.

Net cash provided by financing activities in fiscal 2018 was approximately $0.5 million as compared to cash used in financing activities of $1.8 million in fiscal 2017. The change of $2.4 million is mainly due to payments made under a credit agreement of $1.6 million in the 2017 period, an increase in proceeds from the exercise of stock options of $0.7 million, and a decrease of $0.1 million in installment loan payments in the 2018 period.

The Company believes that its current cash and cash equivalents level, and utilization of the Controlled Equity Offering program if necessary, are sufficient for its foreseeable liquidity and capital resource needs over at least the next twelve (12) months, although there can be no assurance that future events will not alter such view. Although there can be no assurances, in the event additional capital is required, the Company believes it has the ability to raise additional funds through equity offerings or other sources. Our liquidity plans are subject to a number of risks and uncertainties, including those described in the Item 1A. "Risk Factors" section of our Form 10-K for the year ended July 31, 2017, some of which are outside our control. Macroeconomic conditions could limit our ability to successfully execute our business plans and therefore adversely affect our liquidity plans.

Contractual Obligations

There have been no material changes to our Contractual Obligations as reported in our Form 10-K for the fiscal year ended July 31, 2017.

Management is not aware of any material claims, disputes or settled matters concerning third party reimbursement that would have a material effect on our financial statements, except as disclosed in Note 11 to the Consolidated Financial Statements.

Off-Balance Sheet Arrangements

The Company does not have any “off-balance sheet arrangements” as such term is defined in Item 303(a)(4) of Regulation S-K.

Critical Accounting Policies

The Company’s discussion and analysis of its financial condition and results of operations are based upon Enzo Biochem, Inc.’s consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires the Company to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses. These estimates and judgments also affect related disclosure of contingent assets and liabilities.

On an on-going basis, we evaluate our estimates, including those related to contractual expense, allowance for uncollectible accounts, inventory, intangible assets and income taxes. The Company bases its estimates on experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily

apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

Product revenues

Revenues from product sales are recognized when the products are shipped and title transfers, the sales price is fixed or determinable and collectability is reasonably assured.

Royalties

Royalty revenues are recorded in the period earned. Royalties received in advance of being earned are recorded as deferred revenues.

Revenues – Clinical laboratory services

Revenues from Clinical Labs are recognized upon completion of the testing process for a specific patient and reported to the ordering physician. These revenues and the associated accounts receivable are based on gross amounts billed or billable for services rendered, net of a contractual adjustment, which is the difference between amounts billed to payers and the expected approved reimbursable settlements from such payers.

The following table represents the clinical laboratory segment's net revenues and percentages by revenue category:

	Three months ended April 30, 2018		**Three months ended April 30, 2017**	
Revenue category				
Third-party payer	$9,965	55 %	$10,455	53 %
HMO's	2,867	16	2,556	13
Medicare	2,858	16	2,832	15
Patient self-pay	2,447	13	3,741	19
Total	$18,137	100%	$19,584	100%

	Nine months ended	**Nine months ended**

	April 30, 2018		April 30, 2017	
Revenue category				
Third-party payer	$32,726	56 %	$31,422	55 %
Medicare	9,073	16	8,462	15
HMO’s	8,513	15	7,478	13
Patient self-pay	7,689	13	9,617	17
Total	$58,001	100%	$56,979	100%

The Company provides services to certain patients covered by various third-party payers, including the Federal Medicare program. Laws and regulations governing Medicare are complex and subject to interpretation for which action for noncompliance includes fines, penalties and exclusion from the Medicare programs.

Other than the Medicare program, one provider whose programs are included in the “Third-party payers” and “Health Maintenance Organizations” (“HMO’s”) categories represents approximately 40% and 38% of the Clinical Labs segment net revenue for the three months ended April 30, 2018 and 2017 respectively, and 39% and 38% for the nine months ended April 30, 2018 and 2017, respectively.

Contractual Adjustment

The Company’s estimate of contractual adjustment is based on significant assumptions and judgments, such as its interpretation of payer reimbursement policies, and bears the risk of change. The estimation process is based on the experience of amounts approved as reimbursable and ultimately settled by payers, versus the corresponding gross amount billed to the respective payers. The contractual adjustment is an estimate that reduces gross revenue, based on gross billing rates, to amounts expected to be approved and reimbursed. Gross billings are based on a standard fee schedule we set for all third party payers, including Medicare, HMO’s and managed care. The Company adjusts the contractual adjustment estimate quarterly, based on its evaluation of current and historical settlement experience with payers, industry reimbursement trends, and other relevant factors.

The other relevant factors that affect our contractual adjustment include the monthly and quarterly review of: 1) current gross billings and receivables and reimbursement by payer, 2) current changes in third party arrangements and 3) the growth of in-network provider arrangements and managed care plans specific to our Company.

Our clinical laboratory business is primarily dependent upon reimbursement from third-party payers, such as Medicare (which principally serves patients 65 and older) and insurers. We are subject to variances in reimbursement rates among different third-party payers, as well as constant changes of reimbursement rates. Changes that decrease reimbursement rates or coverage would negatively impact our revenues. The number of individuals covered under managed care contracts or other similar arrangements has grown over the past several years and may continue to grow in the future. In addition, Medicare and other government healthcare programs continue to shift to managed care. These trends will continue to reduce our revenues from these programs.

During the three months ended April 30, 2018 and 2017, the contractual adjustment percentages, determined using current and historical reimbursement statistics, were 85.1% and 84.4%, respectively, of gross billings. During the nine months ended April 30, 2018 and 2017, the contractual adjustment percentages, determined using current and historical reimbursements statistics, were 84.7% and 83.6%, respectively. In general, the Company believes a decline in reimbursement rates or a shift to managed care or similar arrangements may be offset by the positive impact of an increase in the number of molecular tests we perform. However, there can be no assurance that we can increase the number of tests we perform or that if we do increase the number of tests we perform, that we can maintain that higher number of tests performed, or that an increase in the number of tests we perform would result in increased revenue.

The Company estimates (by using a sensitivity analysis) that each 1% point change in the contractual adjustment percentage could result in a change in clinical laboratory services revenues of approximately $3.8 million and $3.5 million for the nine months ended April 30, 2018 and 2017, respectively, and a change in the net accounts receivable of approximately $0.6 million as of April 30, 2018.

Our clinical laboratory financial billing system records gross billings using a standard fee schedule for all payers and does not record contractual adjustment by payer at the time of billing. Therefore, we are unable to quantify the effect contractual adjustments recorded during the current period have on revenue recorded in a previous period. However, we can reasonably estimate our monthly contractual adjustment to revenue on a timely basis based on our quarterly review process, which includes:

- an analysis of industry reimbursement trends;
- an evaluation of third-party reimbursement rates changes and changes in reimbursement arrangements with third-party payers;
- a rolling monthly analysis of current and historical claim settlement and reimbursement experience statistics with payers; and
- an analysis of current gross billings and receivables by payer.

Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivable are reported at realizable value, net of allowances for doubtful accounts, which is estimated and recorded in the period of the related revenue.

The following is a table of the Company's net accounts receivable by segment. The Clinical Labs segment's net receivables are detailed by billing category and as a percent to its total net receivables. At April 30, 2018, and July 31, 2017, approximately 77% and 73%, respectively, of the Company's net accounts receivable relates to its Clinical Labs business, which operates in the New York, New Jersey and Connecticut medical communities.

The Life Sciences segment's accounts receivable balance includes $1.1 million or 34% and $1.1 million or 29% of foreign receivables as of April 30, 2018 and July 31, 2017.

Net accounts receivable

Billing category	**As of April 30, 2018**		**As of July 31, 2017**	
Clinical Labs				
Third party payers	$5,338	49 %	$7,256	64 %
Patient self-pay	2,690	24	1,591	14
Medicare	1,743	16	1,385	12
HMO's	1,251	11	1,169	10
Total Clinical Labs	11,022	100%	11,401	100%
Total Life Sciences	3,385		3,779	
Total accounts receivable	$14,407		$15,180	

Changes in the Company's allowance for doubtful accounts are as follows:

	Nine months ended April 30, 2018	Fiscal year ended July 31, 2017
Beginning balance	$3,576	$3,517
Provision for doubtful accounts	1,989	2,775
Write-offs, net	(3,658)	(2,716)
Ending balance	$1,907	$3,576

For the Clinical Labs segment, the allowance for doubtful accounts represents amounts that the Company does not expect to collect after the Company has exhausted its collection procedures. The Company estimates its allowance for doubtful accounts in the period the related services are billed and reduces the allowance in future accounting periods based on write-offs during those periods. The Company bases the estimate for the allowance on the evaluation of historical experience of accounts going to collections and the net amounts not received. Accounts going to collection include the balances, after receipt of the approved settlements from third party payers, for the insufficient diagnosis information received from the ordering physician which result in denials of payment and our estimate of the uncollected portion of receivables from self-payers, including deductibles and copayments, which are subject to credit risk and patients' ability to pay. The Company fully reserves through its contractual allowances amounts that have not been written off because the payer's filing date deadline has not occurred or the collection process has not been exhausted. The Company adjusts the historical collection analysis for recoveries, if any, on an on-going basis. The allowance for doubtful accounts as a percentage of total accounts receivable at April 30, 2018 and July 31, 2017 was 11.7% and 19.1%, respectively. As of April 30, 2018, the Company recorded a reclassification of approximately $1.7 million, which reduced the allowance for doubtful accounts and increased the allowance for contractual allowances; both accounts are netted against accounts receivable on the consolidated balance sheet.

The Company's ability to collect outstanding receivables from third party payers is critical to its operating performance and cash flows. The primary collection risk lies with uninsured patients or patients for whom primary insurance has paid but a patient portion remains outstanding. The Company also assesses the current state of its billing functions in order to identify any known collection or reimbursement issues in order to assess the impact, if any, on the allowance estimates, which involves judgment.

The Company believes that the collectability of its receivables is directly linked to the quality of its billing processes, most notably, those related to obtaining the accurate patient information in order to bill effectively for the services provided. Should circumstances change (e.g. shift in payer mix, decline in economic conditions or deterioration in aging of receivables), our estimates of net realizable value of receivables could be reduced by a material amount.

Billing for laboratory services is complicated because of many factors, especially: the differences between our standard gross fee schedule for all payers and the reimbursement rates of the various payers we deal with, disparity of

coverage and information requirements among the various payers, and disputes with payers as to which party is responsible for reimbursement.

The following table indicates the Clinical Labs aged gross receivables by payer group which is prior to adjustment to gross receivables for: 1) contractual adjustment, 2) fully reserved balances not yet written off, and 3) other revenue adjustments.

As of April 30, 2018	Total	%	Third Party Payers	%	Self-Pay	%	Medicare	%	HMO's	%
1-30 days	$24,684	45	$15,759	43	$ 1,034	17	$ 4,627	52	$3,264	91
31-60 days	7,790	14	5,424	15	1,115	18	1,037	12	214	6
61-90 days	5,365	10	3,634	10	905	15	794	9	32	1
91-120 days	3,881	7	2,437	7	787	13	621	7	36	1
121-150 days	2,210	4	1,392	3	470	8	346	4	2	—
Greater than 150 days	11,250	20	8,076	22	1,736	29	1,394	16	44	1
Totals	$55,180	100%	$36,722	100%	$ 6,047	100%	$ 8,819	100%	$3,592	100%

As of July 31, 2017	Total	%	Third Party Payers	%	Self-Pay	%	Medicare	%	HMO's	%
1-30 days	$25,357	42	$16,683	40	$ 1,082	16	$ 4,022	60	$3,570	82
31-60 days	8,732	15	5,723	14	1,183	17	1,294	19	532	12
61-90 days	5,703	10	4,208	10	927	14	529	9	39	1
91-120 days	3,749	6	2,732	6	701	10	288	4	28	1
121-150 days	3,689	6	2,772	7	672	10	228	3	17	—
Greater than 150 days	12,455	21	9,652	23	2,270	33	379	5	154	4
Totals	$59,685	100%	$41,770	100%	$ 6,835	100%	$ 6,740	100%	$4,340	100%

Income Taxes

The Company accounts for income taxes under the liability method of accounting for income taxes. Under the liability method, deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. The liability method requires that any tax benefits recognized for net operating loss carry forwards and other items be reduced by a valuation allowance where it is not more likely than not the benefits will be realized in the foreseeable future. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. Under the liability method, the effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

It is the Company’s policy to provide for uncertain tax positions and the related interest and penalties based upon management’s assessment of whether a tax benefit is more likely than not to be sustained upon examination by tax authorities. To the extent the Company prevails in matters for which a liability for an unrecognized tax benefit is established or is required to pay amounts in excess of the liability, the Company’s effective tax rate in a given financial statement period may be affected.

Inventory

The Company values inventory at the lower of cost (first-in, first-out) or net realizable value, which approximates market. Work-in-process and finished goods inventories consist of material, labor, and manufacturing overhead. Write downs of inventories to net realizable value are based on a review of inventory quantities on hand and estimated sales forecasts based on sales history and anticipated future demand. Unanticipated changes in demand could have a significant impact on the value of our inventory and require additional write downs of inventory which would impact our results of operations.

Goodwill and Intangible Assets

Goodwill represents the excess of the cost of an acquisition over the fair value of the net assets acquired. Intangible assets, arose primarily from acquisitions, and primarily consist of customer relationships, trademarks, licenses, and website and database content. Finite-lived intangible assets are amortized according to their estimated useful lives, which range from 4 to 15 years.

The Company tests goodwill and long-lived assets annually as of the first day of the fourth quarter, or more frequently if indicators of potential impairment exist. In assessing goodwill and long-lived assets for impairment, the Company has the option to perform a qualitative assessment to determine whether the existence of events or circumstances leads

to a determination that it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If the Company determines that it is not more likely than not that the fair value of a reporting unit is less than its carrying amount, the Company is not required to perform a quantitative test in assessing goodwill and long-lived assets for impairment. However, if the Company concludes otherwise or elects not to perform the qualitative assessment, then it identifies the reporting units and compares the fair value of each of these reporting units to their respective carrying amount. If the carrying amount of the reporting unit is less than its fair value, no impairment exists. If the carrying amount of the reporting unit is higher than its fair value, the impairment charge is the amount by which the carrying amount exceeds its fair value, not to exceed the total amount of goodwill and intangibles allocated to the reporting unit.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

We are exposed to market risk from changes in foreign currency exchange rates resulting from acquisitions with foreign locations (See Item 1A. Risk Factors section of the Form 10-K for the fiscal year ended July 31, 2017) that could impact our results of operations and financial position. We do not currently engage in any hedging or market risk management tools.

Foreign Currency Exchange Rate Risk

The financial reporting of our non-U.S. subsidiaries is denominated in currencies other than the U.S. dollar. Since the functional currency of our non-U.S. subsidiaries is the local currency, foreign currency translation adjustments are accumulated as a component of accumulated other comprehensive income in stockholders' equity. Assuming a hypothetical increase of 10% in the value of the U.S. dollar versus foreign currencies at April 30, 2018, our assets and liabilities would decrease by $0.4 million and $0.1 million, respectively, and our net sales and net earnings (loss) would decrease by $0.9 million and $0.1 million, respectively, on an annual basis.

We also maintain intercompany balances and loans with subsidiaries in different local currencies. These amounts are at risk of foreign exchange losses if exchange rates fluctuate. Assuming a hypothetical increase of 10% in the value of the U.S. dollar versus foreign currencies, our pre-tax earnings (loss) would be unfavorably impacted by approximately $1.4 million on an annual basis.

Interest Rate Risk

As of April 30, 2018, we have fixed interest rate financing on transportation and equipment leases.

Item 4. Controls and Procedures

(a) Evaluation of Disclosure Controls and Procedures

As of the end of the period covered by this report, the Company's management conducted an evaluation (as required under Rules 13a-15(b) and 15d-15(b) under the Securities Exchange Act of 1934, as amended (the "Exchange Act")) of the Company's "disclosure controls and procedures" (as such term is defined under the Exchange Act), under the supervision and with the participation of the principal executive officer and the principal financial officer. Based on this evaluation, the principal executive officer and the principal financial officer concluded that the Company's disclosure controls and procedures are effective as of the end of the period covered by this report. Notwithstanding the foregoing, a control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that it will detect or uncover failures within the Company to disclose material information otherwise required to be set forth in the Company's periodic reports.

(b) Changes in Internal Controls over Financial Reporting

There was no change in the Company's internal controls over financial reporting during the fiscal quarter covered by this report that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II – OTHER INFORMATION

Item 1. Legal Proceedings

There have been no other material developments with respect to previously reported legal proceedings discussed in the annual report on Form 10-K for the fiscal year ended July 31, 2017 filed with the Securities and Exchange Commission, other than as noted in Note 11 to the Consolidated Financial Statements as of April 30, 2018.

Item 1A. Risk Factors

There have been no material changes from the risk factors disclosed in Part 1, Item 1A of the Company's Annual Report on Form 10-K for the fiscal year ended July 31, 2017.

Item 6. Exhibits

Exhibit No.	**Exhibit**
31.1	Certification of Elazar Rabbani, Ph.D. pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Barry Weiner pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of Elazar Rabbani, Ph.D. pursuant to 18 U.S.C. §1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification of Barry Weiner pursuant to 18 U.S.C. §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.DEF*	XBRL Taxonomy Extension Definitions Linkbase Document
101.LAB*	XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase Document

*XBRL (Extensible Business Reporting Language) information is being furnished and not filed for purposes of Sections 11 and 12 of the Securities Act of 1933 and Section 18 of the Securities Exchange Act of 1934.

SIGNATURES

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

ENZO BIOCHEM, INC.
(Registrant)

Date: June 11, 2018 by: /s/ Barry Weiner
President, Chief Financial Officer, Principal Accounting Officer, Treasurer and Director