

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

Mark one

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

For the quarterly period ended January 31, 2020

or

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 No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 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 No

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol	Name of each exchange on which registered
Common stock \$0.01 par	ENZ	New York Stock Exchange

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

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 No

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

Yes No

As of March 2, 2020, the Registrant had 47,557,618 shares of common stock outstanding.

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ENZO BIOCHEM, INC.
CONSOLIDATED BALANCE SHEETS
(in thousands, except share data)

	January 31, 2020 (unaudited)	July 31, 2019
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 51,502	\$ 60,146
Accounts receivable, net	8,912	10,738
Inventories	7,502	7,842
Prepaid expenses and other	3,184	2,727
Total current assets	71,100	81,453
Property, plant and equipment, net	13,568	14,254
Right-of-use assets	22,013	—
Goodwill	7,452	7,452
Intangible assets, net	752	1,032
Other assets, including restricted cash of \$750	1,897	2,449
Total assets	\$ 116,782	\$ 106,640
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable – trade	\$ 8,185	\$ 7,256
Accrued liabilities	10,107	8,362
Other current liabilities	149	391
Finance leases short term	225	—
Current portion of operating lease liabilities	4,534	—
Total current liabilities	23,200	16,009
Long term debt – net	4,138	4,179
Operating lease liabilities, non-current	18,304	—
Other liabilities and finance leases long term	280	424
Total liabilities	45,922	20,612
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: 47,557,618 at January 31, 2020 and 47,556,807 at July 31, 2019	476	476
Additional paid-in capital	333,225	332,704
Accumulated deficit	(265,067)	(249,732)
Accumulated other comprehensive income	2,226	2,580
Total stockholders' equity	70,860	86,028
Total liabilities and stockholders' equity	\$ 116,782	\$ 106,640

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 January 31,		Six Months Ended January 31,	
	2020	2019	2020	2019
Revenues	\$ 19,384	\$ 19,327	\$ 39,591	\$ 40,587
Operating costs and expenses:				
Cost of revenues	13,575	14,748	28,096	28,987
Research and development	1,065	833	2,119	1,561
Selling, general and administrative	10,693	11,497	21,832	22,467
Legal and related expense	2,060	1,142	3,756	2,443
Total operating costs and expenses	<u>27,393</u>	<u>28,220</u>	<u>55,803</u>	<u>55,458</u>
Operating loss	(8,009)	(8,893)	(16,212)	(14,871)
Other income (expense):				
Interest, net	171	227	408	501
Other	72	132	199	179
Foreign exchange gain (loss)	79	126	270	(198)
Loss before income taxes	<u>(7,687)</u>	<u>(8,408)</u>	<u>(15,335)</u>	<u>(14,389)</u>
Net loss	<u>\$ (7,687)</u>	<u>\$ (8,408)</u>	<u>\$ (15,335)</u>	<u>\$ (14,389)</u>
Net loss per common share:				
Basic and diluted	<u>\$ (0.16)</u>	<u>\$ (0.18)</u>	<u>\$ (0.32)</u>	<u>\$ (0.30)</u>
Weighted average common shares outstanding:				
Basic and diluted	<u>47,557</u>	<u>47,199</u>	<u>47,557</u>	<u>47,197</u>

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 January 31,		Six Months Ended January 31,	
	2020	2019	2020	2019
Net loss	\$ (7,687)	\$ (8,408)	\$ (15,335)	\$ (14,389)
Other comprehensive (loss) gain:				
Foreign currency translation adjustments	(83)	(198)	(354)	72
Comprehensive loss	<u>\$ (7,770)</u>	<u>\$ (8,606)</u>	<u>\$ (15,689)</u>	<u>\$ (14,317)</u>

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

ENZO BIOCHEM, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
Three Months Ended January 31, 2020 and 2019
(UNAUDITED)
(in thousands, except share data)

	<i>Common Stock Shares Issued</i>	Common Stock Amount	Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Income	Total Stockholders' Equity
Balance at October 31, 2019	47,556,807	\$ 476	\$ 332,923	\$ (257,380)	\$ 2,309	\$ 78,328
Net loss for the period ended January 31, 2020	—	—	—	(7,687)	—	(7,687)
Share-based compensation charges	—	—	302	—	—	302
Vesting of restricted stock	811	—	—	—	—	—
Foreign currency translation adjustments	—	—	—	—	(83)	(83)
Balance at January 31, 2020	<u>47,557,618</u>	<u>\$ 476</u>	<u>\$ 333,225</u>	<u>\$ (265,067)</u>	<u>\$ 2,226</u>	<u>\$ 70,860</u>

	<i>Common Stock Shares Issued</i>	Common Stock Amount	Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Income	Total Stockholders' Equity
Balance at October 31, 2018	47,192,429	\$ 472	\$ 331,030	\$ (258,202)	\$ 2,370	\$ 75,670
Net loss for the period ended January 31, 2019	—	—	—	(8,408)	—	(8,408)
Exercise of stock options	24,719	—	69	—	—	69
Issuance of common stock for options exercise by Directors	23,376	—	73	—	—	73
Share-based compensation charges	—	—	291	—	—	291
Vesting of restricted stock	811	—	—	—	—	—
Foreign currency translation adjustments	—	—	—	—	(198)	(198)
Balance at January 31, 2019	<u>47,241,335</u>	<u>\$ 472</u>	<u>\$ 331,463</u>	<u>\$ (266,610)</u>	<u>\$ 2,172</u>	<u>\$ 67,497</u>

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

ENZO BIOCHEM, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
Six Months Ended January 31, 2020 and 2019
(UNAUDITED)
(in thousands, except share data)

	<i>Common Stock Shares Issued</i>	Common Stock Amount	Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Income	Total Stockholders' Equity
Balance at July 31, 2019	47,556,807	\$ 476	\$ 332,704	\$ (249,732)	\$ 2,580	\$ 86,028
Net loss for the period ended January 31, 2020	—	—	—	(15,335)	—	(15,335)
Share-based compensation charges	—	—	521	—	—	521
Vesting of restricted stock	811	—	—	—	—	—
Foreign currency translation adjustments	—	—	—	—	(354)	(354)
Balance at January 31, 2020	47,557,618	\$ 476	\$ 333,225	\$ (265,067)	\$ 2,226	\$ 70,860

	<i>Common Stock Shares Issued</i>	Common Stock Amount	Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Income	Total Stockholders' Equity
Balance at July 31, 2018	47,182,254	\$ 472	\$ 330,770	\$ (252,221)	\$ 2,100	\$ 81,121
Net loss for the period ended January 31, 2019	—	—	—	(14,389)	—	(14,389)
Vesting of restricted stock	986	—	—	—	—	—
Exercise of stock options	34,719	—	94	—	—	94
Share-based compensation charges	—	—	526	—	—	526
Net issuance of common stock for options exercised by Directors	23,376	—	73	—	—	73
Foreign currency translation adjustments	—	—	—	—	72	72
Balance at January 31, 2019	47,241,335	\$ 472	\$ 331,463	\$ (266,610)	\$ 2,172	\$ 67,497

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

ENZO BIOCHEM, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(UNAUDITED)
(in thousands)

	Six Months Ended	
	January 31,	
	2020	2019
Cash flows from operating activities:		
Net loss	\$ (15,335)	\$ (14,389)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:		
Depreciation and amortization of property, plant and equipment	1,142	1,040
Amortization of intangible assets	292	494
Share-based compensation charges	521	526
Accrual for share-based 401(k) employer match expense	413	393
Foreign exchange (gain) loss	(319)	159
Changes in operating assets and liabilities:		
Accounts receivable	1,848	1,471
Inventories	368	(254)
Prepaid expenses and other assets	98	(138)
Accounts payable – trade	877	(1,746)
Accrued liabilities, other current liabilities and other liabilities	2,104	(2,331)
Total adjustments	7,344	(386)
Net cash used in operating activities	(7,991)	(14,775)
Cash flows from investing activities:		
Capital expenditures	(434)	(6,988)
Net cash used in investing activities	(434)	(6,988)
Cash flows from financing activities:		
Proceeds from borrowing under mortgage agreement	—	4,500
Repayments under mortgage agreement and finance leases	(229)	(140)
Cost to obtain loan	—	(70)
Proceeds from exercise of stock options	—	166
Net cash (used in) provided by financing activities	(229)	4,456
Effect of exchange rate changes on cash and cash equivalents	10	(6)
Decrease in cash and cash equivalents and restricted cash	(8,644)	(17,313)
Cash and cash equivalents and restricted cash - beginning of period	60,896	60,041
Total cash and cash equivalents and restricted cash - end of period	\$ 52,252	\$ 42,728
The composition of total cash and cash equivalents and restricted cash is as follows:		
Cash and cash equivalents	51,502	41,978
Restricted cash included in other assets	750	750
Total cash and cash equivalents and restricted cash	\$ 52,252	\$ 42,728

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

ENZO BIOCHEM, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
As of January 31, 2020
(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, Enzo Realty LLC and Enzo Realty II LLC, collectively or with one or more of its subsidiaries referred to as the “Company” or “Companies”. The consolidated balance sheet as of January 31, 2020, the consolidated statements of operations and comprehensive income (loss) for the three and six months ended January 31, 2020 and 2019, the consolidated statements of cash flows for the six months ended January 31, 2020 and 2019 and the consolidated statement of stockholders’ equity for the three and six months ended January 31, 2020 and 2019 (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, 2019 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, 2019 has been derived from the audited financial statements at that date. The results of operations for the three and six months ended January 31, 2020 are not necessarily indicative of the results that may be expected for the fiscal year ending July 31, 2020.

Effect of New Accounting Pronouncements

Adoption of New Accounting Standards

On August 1, 2019, the Company adopted a new accounting standard issued by the Financial Accounting Standards Board (“FASB”) on accounting for leases using the modified retrospective method. This new accounting standard requires a lessee to recognize an asset and liability for most leases on its balance sheet. The Company elected the optional transition method that allowed for a cumulative-effect adjustment to the opening balance of retained earnings recorded on August 1, 2019 and did not restate previously reported results in the comparative periods. The Company also elected the package of practical expedients, which among other things, allowed it to carry forward its historical lease classification.

As a result of adoption of the new standard, the Company recorded right-of-use assets and lease liabilities of approximately \$24.4 million and \$25.1 million, respectively as of August 1, 2019. The operating lease liability was determined based on the present value of the remaining minimum rental payments and the right-of-use asset was determined based on the value of the lease liability, adjusted for deferred rent balances of approximately \$0.7 million, which were previously included in accrued expenses. There was no cumulative effect adjustment to the opening balance of accumulated deficit. Accounting for the Company’s finance leases remains substantially unchanged. The adoption of the new standard did not materially impact the Company’s consolidated results of operations or cash flows. The adoption of this new accounting standard resulted in increased qualitative and quantitative disclosures regarding the amount, timing, and uncertainty of cash flows arising from leases.

The Company elected the package of three practical expedients. As such, the Company did not reassess whether expired or existing contracts are or contain a lease and did not need to reassess the lease classifications or reassess the initial direct costs associated with expired or existing leases. The Company did not elect the hindsight practical expedient. Further, the land easement practical expedient was not elected as the practical expedient is not applicable to the Company. The Company elected to take the practical expedient to not separate lease and non-lease components of all asset classes entered into or modified after the effective date. For further details, see Note 8.

Pronouncements Issued but Not Yet Adopted

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, 2023, the effective date for smaller reporting companies 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.

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.

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 27% of Clinical Services net revenue for each of the three and six month periods ended January 31, 2020 and 42% of Clinical Services net revenue for each of the three and six month periods ended January 31, 2019. As of January 31, 2020, other than the Medicare program, one provider whose programs are included in either "Third-party payers" and/or "Health Maintenance Organizations" ("HMO's") categories represents approximately 17% of Clinical Services net receivables.

Income Taxes

The benefit for income taxes and the effective tax rates for the three and six months ended January 31, 2020 and 2019 is \$0. The primary difference between the Company's effective tax rates and the statutory rates for the three and six months ended January 31, 2020 and 2019 is due to the change in net operating losses for which a full valuation allowance is maintained. The Company believes that the valuation allowance is necessary as it is not more likely than not that the deferred tax assets will be realized in the foreseeable future based on positive and negative evidence available at this time. This conclusion was reached because of uncertainties relating to future taxable income, in terms of both its timing and its sufficiency, which would enable the Company to realize its deferred tax assets.

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 six months ended January 31, 2020 and 2019 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 six months ended January 31, 2020, approximately zero and 64,000, respectively of potential common shares ("in the money options") and unvested restricted stock were excluded from the calculation of diluted earnings per share. For the three and six months ended January 31, 2019, the number of potential common shares ("in the money options") and unvested restricted stock excluded from the calculation of diluted earnings per share was 78,000 and 108,000, respectively, because their effect would be antidilutive.

For the three and six months ended January 31, 2020, the effect of approximately 1,897,000 and 1,608,000 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 antidilutive. For the three and six months ended January 31, 2019, the effect of approximately 1,652,000 and 1,491,000 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 antidilutive.

Note 3 – Revenue Recognition

Clinical Services Revenue

Net revenues in the Company's clinical services business accounted for 64% and 65% of the Company's total net revenues for the six months ended January 31, 2020 and 2019, respectively and are primarily comprised of a high volume of relatively low-dollar transactions. The services business, which provides clinical testing services, satisfies its performance obligation and recognizes revenues upon completion of the testing process for a specific patient and reporting to the ordering physician. The Company may also perform clinical testing services for other laboratories and will recognize revenue from those services when reported to the ordering laboratory. The Company estimates the amount of consideration it expects to receive from customer groups using the portfolio approach. These estimates of the expected consideration include the impact of contractual allowances and price concessions on our customer group portfolios consisting of healthcare insurers, government payers, client payers and patients as described below. Contracts with customers in our laboratory services business do not contain a financing component, based on the typically limited period of time between performance of services and collection of consideration. The transaction price includes variable consideration in the form of the contractual allowance and price concessions as well as the collectability of the transaction based on the patient intent and ability to pay. The Company uses the expected value method in estimating the amount of the variability included in the transaction price.

The following are descriptions of our laboratory services business portfolios:

Third party payers and Health Maintenance Organizations (HMO's)

Reimbursements from third party payers, primarily healthcare insurers, and HMO's are based on negotiated fee-for-service schedules. Revenues consist of amounts billed net of contractual allowances for differences between amounts billed and the estimated consideration the Company expects to receive from such payers, which considers historical collection and denial experience and the terms of the Company's contractual arrangements. Adjustments to the allowances, based on actual receipts from the third-party payers, are recorded upon settlement.

Collection of the consideration the Company expects to receive is normally a function of providing complete and correct billing information to these third party payers within the various filing deadlines, and typically occurs within 60 to 90 days of billing. Provided the Company has billed healthcare insurers accurately with complete information prior to the established filing deadline, there has historically been little to no collection risk. If there has been a delay in billing, the Company determines if the amounts in question will likely go past the filing deadline, and if so, will reserve accordingly for the billing.

Third-party payers, including government programs, may decide to deny payment or recoup payments for testing that they contend was improperly billed or not medically necessary, against their coverage determinations, or for which they believe they have otherwise overpaid (including as a result of their own error), and we may be required to refund payments already received. Our revenues may be subject to adjustment as a result of these factors among others, including without limitation, differing interpretations of billing and coding guidance and changes by government agencies and payers in interpretations, requirements, and "conditions of participation" in various programs.

Government Payer - Medicare

Reimbursements from Medicare are based on fee-for-service schedules set by Medicare, which is funded by the government. Revenues consist of amounts billed net of contractual allowances for differences between amounts billed and the estimated consideration the Company expects to receive from Medicare, which considers historical collection and denial experience and other factors. Adjustments to the allowances, based on actual receipts from the government payers, are recorded upon settlement.

Collection of consideration the Company expects to receive is normally a function of providing the complete and correct billing information within the various filing deadlines and typically occurs within 60 days of billing. Provided the Company has billed the government payer accurately with complete information prior to the established filing deadline, there has historically been little to no collection risk. If there has been a delay in billing, the Company determines if the amounts in question will likely go past the filing deadline, and, if so, it will reserve accordingly for the billing.

Patient self-pay

Uninsured patients are billed based on established patient fee schedules or fees negotiated with physicians on behalf of their patients. Coinsurance and deductible responsibilities based on fees negotiated with healthcare insurers are also billed to insured patients and included in this portfolio. Collection of billings from patients is subject to credit risk and ability of the patients to pay. Revenues consist of amounts billed net of discounts provided to uninsured patients in accordance with the Company's policies and implicit price concessions. Implicit price concessions represent differences between amounts billed and the estimated consideration the Company expects to receive from patients, which considers historical collection experience and other factors including current market conditions. Adjustments to the estimated allowances, based on actual receipts from the patients, are recorded upon settlement. Patient billings are generally fully reserved for when the related billing reaches 210 days outstanding. Balances are automatically written off when they are sent to collection agencies. Allowances are further adjusted for estimated recoveries of amounts sent to collection agencies based on historical collection experience, which is regularly monitored. Collection of consideration the Company expects to receive typically occurs within 180 days of billing.

The following table represents clinical services net revenues and percentages by type of customer:

<u>Revenue category</u>	Three months ended		Three months ended	
	January 31, 2020		January 31, 2019	
Third-party payer	\$ 6,404	51%	\$ 6,509	54%
Medicare	3,025	24	2,338	20
Patient self-pay	1,447	12	1,797	15
HMO's	1,637	13	1,356	11
Total	<u>\$ 12,513</u>	<u>100%</u>	<u>\$ 12,000</u>	<u>100%</u>

<u>Revenue category</u>	<u>Six months ended</u> <u>January 31, 2020</u>		<u>Six months ended</u> <u>January 31, 2019</u>	
	Third-party payer	\$ 12,796	51%	\$ 14,415
Medicare	6,178	24	5,089	19
Patient self-pay	2,966	12	3,771	14
HMO's	3,353	13	3,022	12
Total	<u>\$ 25,293</u>	<u>100%</u>	<u>\$ 26,297</u>	<u>100%</u>

For the six months ended January 31, 2020 and 2019, all of the Company's clinical services were provided within the United States.

Products Revenue

Products revenues consist of the sale of single-use products used in the identification of genomic information and are recognized at a point in time following the transfer of control of such products to the customer, which generally occurs upon shipment. Payment terms for shipments to end-user and distributor customers may range from 30 to 90 days. Any claims for credit or return of goods may be made generally within 30 days of receipt. Revenues are reduced to reflect estimated credits and returns, although historically these adjustments have not been material. Taxes collected from customers relating to product sales and remitted to governmental authorities are excluded from revenue. Amounts billed to customers for shipping and handling are included in revenue, while the related shipping and handling costs are reflected in cost of products.

Products revenue by geography is as follows:

	<u>Three Months Ended</u> <u>January 31</u>		<u>Six Months Ended</u> <u>January 31</u>	
	<u>2020</u>	<u>2019</u>	<u>2020</u>	<u>2019</u>
United States	\$ 3,747	\$ 4,106	\$ 8,194	\$ 7,985
Europe	2,046	2,001	3,950	4,050
Rest of the world	1,078	1,220	2,154	2,255
Products revenue	<u>\$ 6,871</u>	<u>\$ 7,327</u>	<u>\$ 14,298</u>	<u>\$ 14,290</u>

Note 4 - Supplemental disclosure for statement of cash flows

For the six months ended January 31, 2020 and 2019, interest paid by the Company was \$136 and \$80, respectively.

For the six months ended January 31, 2020, reductions in the measurement of right of use assets and liabilities included in cash flows from operating activities was approximately \$2,864.

For the six months ended January 31, 2020, non-cash activities related to the adoption of the new accounting standard for leases are detailed in Note 1.

Note 5 – Inventories

Inventories consist of the following:

	<u>January 31,</u> <u>2020</u>	<u>July 31,</u> <u>2019</u>
Raw materials	\$ 873	\$ 876
Work in process	2,539	2,566
Finished products	4,090	4,400
	<u>\$ 7,502</u>	<u>\$ 7,842</u>

Note 6 – Goodwill and intangible assets

At January 31, 2020 and July 31, 2019, the Company has goodwill of \$7,452 allocated to the Clinical Services reporting unit.

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

	<u>Gross</u>	<u>Accumulated Amortization</u>	<u>Net</u>
July 31, 2019	\$ 27,238	\$ (26,206)	\$ 1,032
Amortization expense	—	(291)	(291)
Foreign currency translation	94	(83)	11
January 31, 2020	<u>\$ 27,332</u>	<u>\$ (26,580)</u>	<u>\$ 752</u>

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

	<u>January 31, 2020</u>			<u>July 31, 2019</u>		
	<u>Gross</u>	<u>Accumulated Amortization</u>	<u>Net</u>	<u>Gross</u>	<u>Accumulated Amortization</u>	<u>Net</u>
Patents	\$ 11,027	\$ (11,005)	\$ 22	\$ 11,027	\$ (10,996)	\$ 31
Customer relationships	11,840	(11,110)	730	11,746	(10,745)	1,001
Website and acquired content	1,008	(1,008)	—	1,008	(1,008)	—
Licensed technology and other	483	(483)	—	483	(483)	—
Trademarks	2,974	(2,974)	—	2,974	(2,974)	—
Total	<u>\$ 27,332</u>	<u>\$ (26,580)</u>	<u>\$ 752</u>	<u>\$ 27,238</u>	<u>\$ (26,206)</u>	<u>\$ 1,032</u>

At January 31, 2020, information with respect to intangibles assets acquired is as follows:

	<u>Useful life assigned</u>	<u>Weighted average remaining useful life</u>
Customer relationships	8 -15 years	1 year
Other intangibles	10 years	3 years

At January 31, 2020, the weighted average remaining useful life of intangible assets is approximately one year.

Note 7 - Loan Payable

In connection with the purchase of our new facility, on November 27, 2018, a wholly-owned subsidiary (the “mortgagor subsidiary”) of the Company entered into a Fee Mortgage and Security Agreement (the “mortgage agreement”) with Citibank, N.A. (the “mortgagee”). The mortgage agreement provides for a loan of \$4.5 million for a term of 10 years, bears a fixed interest rate of 5.09% per annum and requires monthly mortgage payments of principal and interest of \$30. Debt issuance costs of \$72 are being amortized over the life of the mortgage agreement. The balance of unamortized debt issuance cost was \$64 at January 31, 2020. At January 31, 2020, the balance owed by the subsidiary under the mortgage agreement was \$4.3 million. The Company’s obligations under the mortgage agreement are secured by the new facility and by a \$750 cash collateral deposit with the mortgagee as additional security. This restricted cash is included in other assets as of January 31, 2020.

The mortgage agreement includes affirmative and negative covenants and events of default, as defined. Events of default include non-payment of principal and interest on debt outstanding, non-performance of covenants, material changes in business, breach of representations, bankruptcy or insolvency, and changes in control. The mortgage includes certain financial covenants. As of January 31, 2020, required financial covenants have been met.

We assumed from the seller an operating lease for a current tenant at the facility which may be extended to June 30, 2020. Rental income from the assumed lease is included in other income.

Minimum future annual principal payments under the mortgage agreement as of January 31, 2020, are as follows:

<u>July 31,</u>	
2020	\$ 70
2021	144
2022	152
2023	160
2024	167
Thereafter	<u>3,649</u>
	<u>\$ 4,342</u>
Less: Current portion	(140)
Unamortized mortgage cost	<u>(64)</u>
	<u>\$ 4,138</u>

Note 8 - Leases

During the first quarter of fiscal 2020, the Company adopted ASU No. 2016-02 "Leases (Topic 842)", which requires leases with durations greater than twelve months to be recognized on the balance sheet. The Company adopted the standard using the modified retrospective approach with an effective date of August 1, 2019. The Company did not apply the new standard to comparative periods and therefore those amounts are not presented below.

The Company determines if an arrangement is or contains a lease at contract inception. The Company leases buildings, office space, patient service centers, and equipment primarily through operating leases, and equipment through a limited number of finance leases. Generally, a right-of-use asset, representing the right to use the underlying asset during the lease term, and a lease liability, representing the payment obligation arising from the lease, are recognized on the balance sheet at lease commencement based on the present value of the payment obligation. For operating leases, expense is recognized on a straight-line basis over the lease term. For finance leases, interest expense on the lease liability is recognized using the effective interest method and amortization of the right-of-use asset is recognized on a straight-line basis over the shorter of the estimated useful life of the asset or the lease term. Short-term leases with an initial term of 12 months or less are not recorded on the balance sheet; the Company recognizes lease expense for these leases on a straight-line basis over the lease term.

The Company primarily uses its incremental borrowing rate in determining the present value of lease payments as the Company's leases generally do not provide an implicit rate.

The Company has lease agreements with (i) right-of-use asset payments and (ii) non-lease components (i.e. payments related to maintenance fees, utilities, etc.) which have generally been combined and accounted for as a single lease component.

The Company's leases have remaining terms of less than 1 year to 9 years, some of which include options to extend the leases for up to 5 years. The Company's lease terms may include renewal options that are reasonably certain to be exercised and termination options that are reasonably certain not to be exercised.

Certain of the Company's lease agreements include rental payments adjusted periodically for inflation or a market rate which are included in the lease liabilities.

Leases	Balance Sheet Classification	January 31, 2020
Assets		
Operating	Right-of-use assets	\$ 22,013
Finance	Property, plant and equipment, net (a)	527
Total lease assets		\$ 22,540
Liabilities		
Current:		
Operating	Current portion of operating lease liabilities	\$ 4,534
Finance	Finance leases short term	225
Non-current:		
Operating	Operating lease liabilities, non-current	18,304
Finance	Other liabilities and finance leases long term	280
Total lease liabilities		\$ 23,343

(a) Finance lease assets net of accumulated amortization were approximately \$0.8 million as of January 31, 2020.

Components of lease cost for the three and six months ended January 31, 2020 were as follows:

<u>Lease cost</u>	Three Months Ended January 31, 2020	Six Months Ended January 31, 2020
Operating lease cost	\$ 1,474	\$ 2,948
Finance lease cost:		
Amortization of leased assets	60	115
Interest on lease liabilities	22	34
Net lease cost	<u>\$ 1,556</u>	<u>\$ 3,097</u>

The maturity of the Company's lease liabilities as of January 31, 2020 is as follows:

<u>Maturity of lease liabilities</u>	<u>Operating leases</u>	<u>Finance leases</u>	<u>Total</u>
Remainder of fiscal 2020	\$ 2,952	\$ 241	\$ 3,193
2021	4,997	127	5,124
2022	3,786	79	3,865
2023	3,284	74	3,358
2024	3,274	—	3,274
Thereafter	9,556	—	9,556
Total lease payments	27,849	521	28,370
Less: Interest (a)	(5,011)	(16)	(5,027)
Present value of lease liabilities	<u>\$ 22,838</u>	<u>\$ 505</u>	<u>\$ 23,343</u>

(a) Primarily calculated using the Company's incremental borrowing rate.

Lease term and discount rate for the six months ended January 31, 2020 were as follows:

<u>Lease term and discount rate</u>	
Weighted-average remaining lease term (years):	
Operating leases	6.5 years
Finance leases	2.6 years
Weighted-average discount rate:	
Operating leases	4.9%
Finance leases	3.0%

See Note 4 for cash flow information on cash paid for amounts included in the measurement of lease liabilities for the six months ended January 31, 2020.

Note 9 – Accrued Liabilities

Accrued liabilities consist of the following:

	January 31, 2020	July 31, 2019
Payroll, benefits, and commissions	\$ 5,972	\$ 5,123
Professional fees	817	774
Legal	1,761	164
Other	1,557	2,301
	<u>\$ 10,107</u>	<u>\$ 8,362</u>

Controlled Equity Offering

The Company has a Controlled Equity Offering SM 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 six months ended January 31, 2020 and 2019, the Company did not sell any shares of Common Stock under the Sales Agreement.

Share-based compensation

In January 2011, the Company's stockholders approved the adoption of the 2011 Incentive Plan (the "2011 Plan") which provides for the issuance of equity awards, including among others, options, restricted stock and restricted stock units for up to 3,000,000 Common Shares. The exercise price of options granted under the 2011 Plan, and consistent with other Plans, is equal to or greater than fair market value of the Common Stock on the date of grant. Unless terminated earlier by the Board of Directors, the 2011 Plan will terminate at the earliest of; (a) such time as no shares of Common Stock remain available for issuance under the 2011 Plan or (b) tenth anniversary of the effective date of the 2011 Plan. On January 5, 2018, the Company's stockholders approved the amendment and restatement of the 2011 Plan to increase the number of shares available for issuance by 2,000,000 bringing the total number of shares available for award under the 2011 Plan to 5,000,000. Awards outstanding upon expiration of the 2011 Plan shall remain in effect until they have been exercised, terminated, or have expired.

The total number of shares available for grant as equity awards from the 2011 Incentive Plan is approximately 1,677,000 shares as of January 31, 2020.

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

	Three months ended January 31,		Six months ended January 31,	
	2020	2019	2020	2019
Stock options	\$ 301	\$ 289	\$ 518	\$ 521
Restricted stock	1	2	3	5
	<u>\$ 302</u>	<u>\$ 291</u>	<u>\$ 521</u>	<u>\$ 526</u>

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 ended January 31,		Six months ended January 31,	
	2020	2019	2020	2019
Selling, general and administrative	\$ 302	\$ 291	\$ 521	\$ 526
	<u>\$ 302</u>	<u>\$ 291</u>	<u>\$ 521</u>	<u>\$ 526</u>

No excess tax benefits were recognized during the six month periods ended January 31, 2020 and 2019.

Stock Option Plans

The following table summarizes stock option activity during the six month period ended January 31, 2020:

	Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value (000s)
Outstanding at July 31, 2019	2,351,040	\$4.53		
Awarded	1,500	\$3.32		
Exercised	—	—		\$ —
Cancelled or expired	(455,576)	\$3.58		
Outstanding at end of period	1,896,964	\$4.75	2.7 years	\$ —
Exercisable at end of period	1,486,162	\$5.11	1.4 years	\$ —

As of January 31, 2020, the total future compensation cost related to non-vested options, not yet recognized in the statements of operations, was \$0.5 million and the weighted average period over which the remaining expense of these awards is expected to be recognized is approximately ten 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.

Performance Stock Units

To better align the long-term interest of executives with growing U.S. practices, beginning in fiscal 2018, the Company granted long-term incentive awards in the form of time based stock options and performance-based restricted stock units ("Performance Stock Units" or "PSUs"). The PSUs earned will be determined over a three-year performance period. The primary performance metrics will be revenue and Adjusted EBITDA growth. Payouts based on revenue and adjusted EBITDA goals will be modified based on Total Shareholder Return ("TSR") performance relative to Enzo's peer group.

During fiscal year 2019 and 2018, the Company awarded PSUs to its executive officers, this award provides for the grant of shares of our common stock at the end of a three-year period based on the achievement of average revenue growth and adjusted EBITDA growth over that period. During fiscal 2020, one former executive forfeited a total of 14,500 PSUs. As of January 31, 2020, the Company did not accrue any compensation expense for these PSU's as the achievement of the growth goals is currently not probable.

The following table summarizes PSU's granted and outstanding as of January 31, 2020:

Grant Date	Total Grant	Forfeitures	Outstanding	Fair Market Value At Grant Date (000s)
7/31/2018	32,000	(4,000)	28,000	\$ 124
1/3/2019	80,500	(10,500)	70,000	\$ 196

Restricted Stock Awards

The fair value of a restricted stock award is determined based on the closing stock price on the award date. As of January 31, 2020, there were 817 shares of unvested restricted stock which have a weighted average award price of \$3.34 per share. As of January 31, 2020, there was approximately \$6 of unrecognized compensation cost related to these unvested shares of restricted stock to be recognized over a weighted average remaining period of approximately one year. There were no awards made during the six months ended January 31, 2020. During the six months ended January 31, 2020, a total of 811 restricted stock awards vested whose fair value was approximately \$2.

Note 11 – Segment reporting

The Company has three reportable segments: Products, Clinical Services and Therapeutics. The Company's Products segment develops, manufactures, and markets products to research and pharmaceutical customers. The Clinical Services segment provides diagnostic services to the health care community. The Company's Therapeutics 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 and related expenses incurred to defend the Company's intellectual property, which may result in settlements recognized in another segment and other general corporate matters are considered a component of the Other segment. Legal and related expense specific to other segments' activities have been allocated to those segments.

Legal settlements, net, represent activities for which royalties would have been received in the Company's Products segment. 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.

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

Three months ended January 31, 2020

	<u>Clinical Services</u>	<u>Products</u>	<u>Therapeutics</u>	<u>Other</u>	<u>Consolidated</u>
Revenues	\$ 12,513	\$ 6,871	—	—	\$ 19,384
<u>Operating costs and expenses:</u>					
Cost of revenues	10,243	3,332	—	—	13,575
Research and development	373	503	\$ 189	—	1,065
Selling, general and administrative	5,895	2,530	—	\$ 2,268	10,693
Legal and related expenses	38	1	—	2,021	2,060
Total operating costs and expenses	<u>16,549</u>	<u>6,366</u>	<u>189</u>	<u>4,289</u>	<u>27,393</u>
Operating income (loss)	(4,036)	505	(189)	(4,289)	(8,009)
<u>Other income (expense):</u>					
Interest	(10)	16	—	165	171
Other	16	7	—	49	72
Foreign exchange loss	—	79	—	—	79
Income (loss) before income taxes	<u>\$ (4,030)</u>	<u>\$ 607</u>	<u>\$ (189)</u>	<u>\$ (4,075)</u>	<u>\$ (7,687)</u>
Depreciation and amortization included above	<u>\$ 392</u>	<u>\$ 253</u>	<u>\$ —</u>	<u>\$ 65</u>	<u>\$ 710</u>
<u>Share-based compensation included in above:</u>					
Selling, general and administrative	33	22	—	247	302
Total	<u>\$ 33</u>	<u>\$ 22</u>	<u>\$ —</u>	<u>\$ 247</u>	<u>\$ 302</u>
Capital expenditures	<u>\$ 142</u>	<u>\$ 18</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 160</u>

Three months ended January 31, 2019

	<u>Clinical Services</u>	<u>Products</u>	<u>Therapeutics</u>	<u>Other</u>	<u>Consolidated</u>
Revenues	\$ 12,000	\$ 7,327	—	—	\$ 19,327
<u>Operating costs and expenses:</u>					
Cost of revenues	11,025	3,723	—	—	14,748
Research and development	—	611	\$ 222	—	833
Selling, general and administrative	6,200	2,981	—	\$ 2,316	11,497
Legal fee expense	38	1	—	1,103	1,142
Total operating costs and expenses	<u>17,263</u>	<u>7,316</u>	<u>222</u>	<u>3,419</u>	<u>28,220</u>
Operating income (loss)	(5,263)	11	(222)	(3,419)	(8,893)
<u>Other income (expense):</u>					
Interest	(15)	14	—	228	227
Other	(29)	(4)	—	165	132
Foreign exchange loss	—	126	—	—	126
(Loss) income before income taxes	<u>\$ (5,307)</u>	<u>\$ 147</u>	<u>\$ (222)</u>	<u>\$ (3,026)</u>	<u>\$ (8,408)</u>
Depreciation and amortization included above	<u>\$ 374</u>	<u>\$ 343</u>	<u>\$ —</u>	<u>\$ 51</u>	<u>\$ 768</u>
<u>Share-based compensation included in above:</u>					
Selling, general and administrative	40	26	—	225	291
Total	<u>\$ 40</u>	<u>\$ 26</u>	<u>\$ —</u>	<u>\$ 225</u>	<u>\$ 291</u>
Capital expenditures	<u>\$ 409</u>	<u>\$ 26</u>	<u>\$ —</u>	<u>\$ 6,147</u>	<u>\$ 6,582</u>

Six months ended January 31, 2020

	Clinical Services	Products	Therapeutics	Other	Consolidated
Revenues	\$ 25,293	\$ 14,298	—	—	\$ 39,591
Operating costs and expenses:					
Cost of revenues	21,218	6,878	—	—	28,096
Research and development	723	1,019	\$ 377	—	2,119
Selling, general and administrative	12,110	5,287	—	\$ 4,435	21,832
Legal and related expenses	88	1	—	3,667	3,756
Total operating costs and expenses	<u>34,139</u>	<u>13,185</u>	<u>377</u>	<u>8,102</u>	<u>55,803</u>
Operating income (loss)	(8,846)	1,113	(377)	(8,102)	(16,212)
Other income (expense):					
Interest	(22)	34	—	396	408
Other	19	(5)	—	185	199
Foreign exchange loss	—	270	—	—	270
Income (loss) before income taxes	<u>\$ (8,849)</u>	<u>\$ 1,412</u>	<u>\$ (377)</u>	<u>\$ (7,521)</u>	<u>\$ (15,335)</u>
Depreciation and amortization included above	<u>\$ 801</u>	<u>\$ 503</u>	<u>\$ —</u>	<u>\$ 130</u>	<u>\$ 1,434</u>
Share-based compensation included in above:					
Selling, general and administrative	67	44	—	410	521
Total	<u>\$ 67</u>	<u>\$ 44</u>	<u>\$ —</u>	<u>\$ 410</u>	<u>\$ 521</u>
Capital expenditures	<u>\$ 289</u>	<u>\$ 145</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 434</u>

Six months ended January 31, 2019

	Clinical Services	Products	Therapeutics	Other	Consolidated
Revenues	\$ 26,297	\$ 14,290	—	—	\$ 40,587
Operating costs and expenses:					
Cost of revenues	21,993	6,994	—	—	28,987
Research and development	—	1,118	\$ 443	—	1,561
Selling, general and administrative	12,260	5,905	—	\$ 4,302	22,467
Legal fee expense	74	8	—	2,361	2,443
Total operating costs and expenses	<u>34,327</u>	<u>14,025</u>	<u>443</u>	<u>6,663</u>	<u>55,458</u>
Operating income (loss)	(8,030)	265	(443)	(6,663)	(14,871)
Other income (expense):					
Interest	(33)	30	—	504	501
Other	11	—	—	168	179
Foreign exchange loss (gain)	—	(198)	—	—	(198)
(Loss) income before income taxes	<u>\$ (8,052)</u>	<u>\$ 97</u>	<u>\$ (443)</u>	<u>\$ (5,991)</u>	<u>\$ (14,389)</u>
Depreciation and amortization included above	<u>\$ 777</u>	<u>\$ 685</u>	<u>\$ —</u>	<u>\$ 72</u>	<u>\$ 1,534</u>
Share-based compensation included in above:					
Selling, general and administrative	78	50	—	398	526
Total	<u>\$ 78</u>	<u>\$ 50</u>	<u>\$ —</u>	<u>\$ 398</u>	<u>\$ 526</u>
Capital expenditures	<u>\$ 763</u>	<u>\$ 78</u>	<u>\$ —</u>	<u>\$ 6,147</u>	<u>\$ 6,988</u>

Note 12 – Contingencies

There are currently three cases that were originally brought by the Company in the United States District Court for the District of Delaware (“the Court”), alleging patent infringement against various companies. In 2017, the Court entered summary judgment against the Company that the asserted claims of the ‘180 and ‘405 Patents are invalid for nonenablement in cases involving Abbott, Becton Dickinson, Gen-Probe, Hologic, and Roche. The Company appealed the Court’s final judgment of invalidity in those cases to the United States Court of Appeals for the Federal Circuit (“Federal Circuit”), which were subsequently consolidated (“the Consolidated Appeals”). The Federal Circuit heard oral argument in the Consolidated Appeals on January 7, 2019. In the Consolidated Appeals, the Company had 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, and Roche to the Court. On June 20, 2019 the Federal Circuit affirmed the District Court’s grant of summary judgment of non-enablement with respect to the ‘180 and ‘405 patents. The Company filed a petition for rehearing and rehearing *en banc* on August 5, 2019. The Federal Circuit requested that the Abbott, Becton Dickinson, and Roche Defendants submit a response to that petition, which they filed on October 11, 2019. The Federal Circuit denied Enzo’s petition on October 29, 2019. On February 26, 2020, Enzo filed a petition for writ of certiorari to the United States Supreme Court, requesting review of the Federal Circuit’s decision that affirmed the district court’s rulings.

In April 2019, the Company entered into an agreement with Hologic and Grifols, resolving litigation resulting from four cases originally brought by the Company in the Court. As a result, Enzo dismissed (1) a stayed patent litigation regarding the ‘180 and ‘197 Patent against Hologic in the Court; (2) the Consolidated Appeals against Gen-Probe and Hologic resulting from two cases filed in the Court, and (3) the Company’s appeal in the litigation involving the ‘581 Patent that involved both Hologic and Grifols. As a result of the agreement with Hologic, Hologic withdrew from Enzo’s Federal Circuit appeal of the Patent Trial and Appeal Board’s adverse rulings in two *inter partes* review proceedings regarding the ‘197 Patent filed by Hologic and joined by Becton Dickinson (“the ‘197 PTAB Appeals”).

Regarding the ‘197 PTAB Appeals, on August 16, 2019, the Federal Circuit affirmed the Board’s decision finding that each of the challenged claims is unpatentable as anticipated or obvious. The Company filed a petition for rehearing and rehearing *en banc* on October 30, 2019, which the Federal Circuit denied on December 4, 2019.

On February 5, 2020, plaintiffs Harbert Discovery Fund, LP and Harbert Discovery Co-Investment Fund I, LP (“Plaintiffs”) filed a complaint in the United States District Court for the Southern District of New York in connection with the Company’s 2020 annual meeting (the “Annual Meeting”). The Complaint names the Company, Dr. Elazar Rabbani, Barry W. Weiner, Dr. Bruce A. Hanna, Dov Perlysky and Rebecca Fischer as defendants (“Defendants”). Plaintiffs assert claims (i) against the Company and the individual defendants for alleged violations of the federal securities laws, in connection with certain of the Company’s public statements concerning the Annual Meeting; (ii) derivatively, against the individual defendants, for breach of fiduciary duty and anticipatory breach of contract; and (iii) derivatively, against the individual defendants, seeking a declaratory judgment that a certain proposal up for vote at the Annual Meeting is invalid. Plaintiffs request injunctive relief, a declaratory judgment, damages, attorneys’ fees and other unspecified relief. On February 27, 2020, the parties filed a stipulated schedule, which was entered by the Court, and which provides that Plaintiffs will file an amended complaint by March 26, 2020, and that Defendants will respond to the amended complaint by May 1, 2020. Discovery has not commenced.

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.

As described in Note 3, third-party payers, including government programs, may decide to deny payment or recoup payments for testing that they contend was improperly billed or not medically necessary, against their coverage determinations, or for which they believe they have otherwise overpaid (including as a result of their own error), and we may be required to refund payments already received. During the third fiscal quarter of 2019, a significant third-party payer informed us outside of their typical business practice that they believe it overpaid the Company during certain periods of fiscal 2018. The Company disputes these claims, has formally sent legal appeal letters to the payer, and at the present time may exercise its rights under the terms of the agreement with the payer and file a notice of arbitration. At this time, the Company is unable to determine the probability of the outcome of these appeals or reasonably estimate a range of potential losses associated with this claim. During the six month 2020 period, we recorded \$0.8 million in legal and related expenses as a result of reduced reimbursements this payer made to us.

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", "believe", "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, 2019 fiscal year and updated in Item 1A. "Risk Factors in this Form 10-Q, 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 diagnostics, clinical lab, and life sciences company focused on delivering and applying advanced technology capabilities to produce affordable reliable products and services that enable our customers to meet their clinical needs. Through a connection with the market, we provide advanced biotechnology solutions to the global community as affordable and flexible quality products and services. We develop, manufacture and sell our proprietary technology solutions and platforms to clinical laboratories, specialty clinics, researchers and physicians globally. Enzo's structure and business strategy represent the culmination of years of extensive planning and work. The Company has the unique ability to offer low cost, high performance products and services for diagnostic testing, which ideally positions us 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 develops low cost diagnostic platform products and related services. Our platform development includes automation-compatible reagent systems and associated products for sample collection and processing through analysis. We develop affordable products and services to improve healthcare, one of the greatest challenges today. Enzo combines over 40 years of expertise in technology development with assay development capabilities and diagnostic testing services to create high performance, cost-effective, and open assay solutions. The ability to combine these assets in one company is unique. With our strong intellectual property portfolio integrated with assay development know-how, production, distribution, validation and services capabilities, we have enabled sustainable products and services for a market that is facing increasing pressure in costs and reimbursement

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 NY State Department of Health approved GenFlex platform addresses the \$450 million annualized global CT/NG/TV diagnostic market as well as the \$1.3 billion women's health market. According to the Centers for Disease Control and Prevention (CDC), there are more than 1.7 million cases of Chlamydia (CT), 500,000 cases of Neisseria Gonorrhoea (NG) and 3.7 million cases of Trichomonas Vaginalis (TV) in the United States per annum. We are currently developing extensions of the GenFlex platform which could eventually address the entire \$7 billion molecular diagnostic market. GenFlex is a commercially available sample-to-result molecular diagnostic platform that includes sample collection, sample processing, amplification and detection. The GenFlex open system delivers high-throughput, high capacity, workflow efficiency and flexibility at a much greater level of affordability than existing systems. Furthermore, 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 463 issued patents worldwide and over 75 pending patent applications, along with extensive enabling technologies and platforms.

Below are brief descriptions of each of our operating segments (See Note 11 in the Notes to Consolidated Financial Statements):

Enzo Clinical Lab 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 Clinical Laboratory Improvement Amendments of 1988 ("CLIA") certified and 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 Connecticut, two free standing "STAT" or rapid response laboratories in New York City and Connecticut, an in-house logistics department, and an information technology department. Under our license in New York State, we are able to offer testing services to clinical laboratories and physicians nationwide.

The Clinical Laboratory Services reporting unit is impacted by various risk factors, including among others, reduced reimbursements from third party payers for testing performed and from recent health care legislation. Despite the growth we have experienced in previous years, there can be no assurance future growth can be achieved. The introduction of new molecular and esoteric tests is expected to increase our revenue per test and could offset impacts from the above factors. The Company anticipates improved profitability with increased service volume.

Enzo Life Sciences manufactures, develops and markets products and tools for 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. 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 also the life sciences markets 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 100 patents and patent applications. In December 2019, Enzo announced it will consider various avenues to unlock value in Enzo Therapeutics. Alternatives under consideration include a possible spin-off, sale, joint venture or licensing of its intellectual property.

Results of Operations
Three months ended January 31, 2020 compared to January 31, 2019
(in 000s)

Comparative Financial Data for the Three Months Ended January 31.

	<u>2020</u>	<u>2019</u>	<u>Favorable (Unfavorable)</u>	<u>% Change</u>
Revenues	\$ 19,384	\$ 19,327	\$ 57	**
Operating costs and expenses:				
Cost of revenues	13,575	14,748	1,173	8
Research and development	1,065	833	(232)	(28)
Selling, general and administrative	10,693	11,497	804	7
Legal and related expenses	2,060	1,142	(918)	(80)
Total operating costs and expenses	<u>27,393</u>	<u>28,220</u>	<u>827</u>	<u>3</u>
Operating loss	(8,009)	(8,893)	884	10
Other income (expense):				
Interest	171	227	(56)	(25)
Other	72	132	(60)	(45)
Foreign currency gain	79	126	(47)	(37)
Loss before income taxes	<u>\$ (7,687)</u>	<u>\$ (8,408)</u>	<u>\$ 721</u>	<u>9</u>

** not meaningful

Consolidated Results:

The "2020 period" and the "2019 period" refer to the three months ended January 31, 2020 and 2019, respectively.

Clinical services revenues for the 2020 period were \$12.5 million compared to \$12.0 million in the 2019 period, an increase of \$0.5 million or 4%. Volume increases in our core and other non-genetic testing services offset declines in genetic testing volume, resulting in the revenue increase. Total diagnostic testing volume measured by the number of accessions increased 7%, however, the impact from the Protecting Access to Medicare Act ("PAMA") continues to negatively impact reimbursements from Medicare and third party payers. In January 2018, PAMA rates became effective including substantial reductions in the Clinical Lab Fee Schedule paid for fee-for-service tests regarding Medicare and Medicaid reimbursement. In the normal course of business, estimated collection amounts are subject to the complexities and ambiguities of third party payer billing, reimbursement regulations and claims processing, as well as issues unique to Medicare and Medicaid programs, and require us to consider the potential for adjustments when estimating variable consideration in the recognition of revenue in the period that the related services are rendered. During the 2019 period, adjustments to estimated collections amounts from third party payers and HMO's decreased Services revenues by \$0.8 million.

Product revenues for the 2020 and 2019 periods were \$6.9 million and \$7.3 million, respectively. The decrease of \$0.4 million or 6% is primarily the result of lower product sales volume in the U.S. market, due to the timing of orders.

The cost of Clinical Services was \$10.2 million in the 2020 period and \$11.0 million in the 2019 period, a decrease of \$0.8 million, attributable to reductions in outside reference testing expense and headcount efficiencies, partially offset by increased reagent costs from higher accession volume. As a result, the gross profit margin on Clinical Services was 18% in the 2020 period and 8% in the 2019 period.

The cost of product revenues was \$3.3 million in the 2020 period and \$3.7 million in the 2019 period, a decrease of \$0.4 million or 10% due to the decrease in revenues. The gross profit margin on products was 52% in the 2020 period and 50% in the 2019 period, due to the mix of products sold.

Research and development expenses were approximately \$1.0 million in the 2020 period and \$0.8 million in the 2019 period, an increase of \$0.2 million or 28%. The increase is entirely attributed to the Clinical Services division for lab developed tests including those based on our proprietary GenFlex platform. The New York State Department of Health recently approved the use of certain lab tests based on the GenFlex platform.

Selling, general and administrative expenses were approximately \$10.7 million during the 2020 period versus \$11.5 million during the 2019 period, a decrease of \$0.8 million or 7%. The Clinical Services expense decreased \$0.3 million, primarily due to cost savings initiatives. The Life Sciences Products expense decreased \$0.5 million primarily due to reductions in sales and marketing salaries and related costs.

Legal and related expenses were approximately \$2.0 million during the 2020 period compared to \$1.1 million in the 2019 period, an increase of \$0.9 million. During the 2020 period, we incurred \$1.8 million for contested proxy costs relating to our February 2020 annual shareholders meeting. Legal expense associated with legal activity and related costs associated with on-going litigation and contract disputes where the Company is the plaintiff decreased \$0.8 million due to the timing of activities.

Interest income, net was approximately \$0.2 million in both the 2020 and 2019 periods and represents interest on cash and cash equivalents.

The foreign currency revaluation gain recognized by the Life Sciences Products segment during both the 2020 and 2019 periods was \$0.1 million due to the appreciation of the Swiss franc and British pound versus the U.S. dollar.

Results of Operations
Six months ended January 31, 2020 compared to January 31, 2019
(in 000s)

Comparative Financial Data for the Six Months Ended January 31,

	<u>2020</u>	<u>2019</u>	<u>Favorable (Unfavorable)</u>	<u>% Change</u>
Revenues	\$ 39,591	\$ 40,587	\$ (996)	(2)
Operating costs and expenses:				
Cost of revenues	28,096	28,987	891	3
Research and development	2,119	1,561	(588)	(36)
Selling, general and administrative	21,832	22,467	635	3
Legal and related expenses	3,756	2,443	(1,313)	(54)
Total operating costs and expenses	<u>55,803</u>	<u>55,458</u>	<u>(345)</u>	(1)
Operating loss	(16,212)	(14,871)	(1,341)	(9)
Other income (expense):				
Interest	408	501	(93)	(19)
Other	199	179	20	11
Foreign currency gain (loss)	270	(198)	468	**
Loss before income taxes	<u>\$ (15,335)</u>	<u>\$ (14,389)</u>	<u>\$ (946)</u>	(7)

** not meaningful

Consolidated Results:

The "2020 period" and the "2019 period" refer to the six months ended January 31, 2020 and 2019, respectively.

Clinical services revenues for the 2020 period were \$25.3 million compared to \$26.3 million in the 2019 period, a decrease of \$1.0 million or 4%. The decrease is due to lower genetics testing volume and reimbursement rates due to an increase in denial rates and changes to medical and procedural requirements. Volume declines in genetic testing were offset by increased volume in our other testing services. Total diagnostic testing volume measured by the number of accessions increased 5%, however, the impact from the Protecting Access to Medicare Act ("PAMA") continues to impact reimbursements from Medicare and third party payers. In the normal course of business, estimated collection amounts are subject to the complexities and ambiguities of third party payer billing, reimbursement regulations and claims processing, as well as issues unique to Medicare and Medicaid programs, and require us to consider the potential for adjustments when estimating variable consideration in the recognition of revenue in the period that the related services are rendered.

Product revenues for the 2020 and 2019 periods were \$14.3 million. During the 2020 period, a slight increase in product sales volume in the U.S. market was offset by the negative impact of foreign exchange translation of revenues from the international market.

The cost of Clinical Services was \$21.2 million in the 2020 period and \$22.0 million in the 2019 period, a decrease of \$0.8 million due to reductions in outside reference testing expense and headcount efficiencies, partially offset by increased reagent costs from higher accession volume. The gross profit margin on Clinical Services was approximately 16% in both periods and was impacted by reduced genetics reimbursements. The 2020 period was also impacted by the increased volume of lower margin testing services in the 2020 period.

The cost of product revenues was \$6.8 million in both the 2020 and 2019 periods. The gross profit margin on products was approximately 52% in both periods.

Research and development expenses were \$2.1 million in the 2020 period and \$1.6 million in the 2019 period, an increase of \$0.5 million or 36%. The increase is entirely attributed to the Clinical Services division for lab developed tests including those based on our proprietary GenFlex platform. The New York State Department of Health recently approved the use of certain lab tests based on the GenFlex platform.

Selling, general and administrative expenses were approximately \$21.8 million during the 2020 period versus \$22.4 million during the 2019 period, a decrease of \$0.6 million or 3%. The Life Sciences Products expense decreased \$0.6 million primarily due to reductions in sales and marketing salaries and related costs, as well as cost savings initiatives. The Clinical Services expense decreased \$0.1 million, primarily due to cost savings initiatives. The Other segment expense increased \$0.1 million due to higher self-insured health care costs.

Legal and related expenses were \$3.8 million during the 2020 period compared to \$2.4 million in the 2019 period, an increase of \$1.3 million. During the 2020 period, we incurred \$2.5 million for contested proxy costs relating to our February 2020 annual shareholders meeting. As described in Note 3, third-party payers, including government programs, may decide to deny payment or recoup payments for testing that they contend was improperly billed or not medically necessary, against their coverage determinations, or for which they believe they have otherwise overpaid (including as a result of their own error), and we may be required to refund payments already received. During the third fiscal quarter of 2019, a significant third-party payer informed us outside of their typical business practice that they believe it overpaid the Company during certain periods of fiscal 2018. The Company disputes these claims and has formally sent legal appeal letters to the payer. In the 2020 period, we recorded \$0.8 million in legal and related expenses as a result of reduced reimbursements this payer made to us. At this time, we are unable to determine the probability of the outcome of these appeals or reasonably estimate a range of potential losses associated with this claim. Legal expense associated with legal activity and related costs associated with on-going litigation and contract disputes where the Company is the plaintiff decreased \$1.7 million due to the timing of activities.

Interest income, net was \$0.4 million in the 2020 period and \$0.5 million in the 2019 period and represents interest on cash and cash equivalents. Interest rates and cash in money market funds were higher in the 2019 period.

The foreign currency revaluation gain recognized by the Life Sciences Products segment during the 2020 period was \$0.3 million compared to a loss of \$0.2 million in the 2019 period, a favorable variance of \$0.5 million. During the 2020 period, the gain was primarily due to the significant appreciation of the British pound versus the U.S. dollar, and to a lesser extent the appreciation of the Swiss franc and Euro, compared to the 2019 period.

Liquidity and Capital Resources

At January 31, 2020, the Company had cash and cash equivalents and restricted cash of \$52.3 million of which \$0.4 million was in foreign accounts, as compared to cash and cash equivalents and restricted stock of \$60.9 million, of which \$0.7 million was in foreign accounts at July 31, 2019. 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 \$47.9 million at January 31, 2020 compared to \$65.4 million at July 31, 2019. The decrease in working capital of \$17.5 million was due to the period loss, the adoption of the new accounting standard for leases, which resulted in the recognition of \$4.6 million of current operating lease liabilities at January 31, 2020, and the net changes in current operating assets and liabilities.

Net cash used in operating activities during the 2020 period was approximately \$8.0 million as compared to \$14.8 million during the 2019 period, an improvement of approximately \$6.8 million. The improvement is mainly due to net changes in operating assets and liabilities of \$8.3 million partially offset by an increase in the 2020 period net loss compared to 2019.

Net cash used in investing activities in fiscal 2020 and 2019 was approximately \$0.4 million and \$7.0 million, respectively. The 2020 period consists of capital expenditures and the 2019 period is mainly due to the purchase of our new facility.

Net cash used in financing activities in fiscal 2020 was \$0.2 million as compared to net cash provided by financing activities of \$4.5 million in fiscal 2019 related to the mortgage agreement entered into for the purchase of our new facility.

The mortgage agreement, a loan of \$4.5 million for a term of 10 years, bears a fixed interest rate of 5.09% per annum and requires monthly mortgage payments of \$30. At January 31, 2020, the balance owed under the mortgage agreement was \$4.3 million. The Company's obligations under the mortgage agreement are secured by the purchased facility and by a \$750 cash collateral deposit with the mortgagee as additional security. This restricted cash is included in other assets as of January 31, 2020. See Note 7 – Loan Payable.

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. We expect our cash reserves will be reduced over the next four quarters as we implement our strategy of developing innovative diagnostic platforms and assays for use by independent labs. 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, 2019, 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, 2019. 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 12 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, 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, as permitted under rules promulgated by the Security and Exchange Commission. 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, operating lease liabilities, goodwill 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.

Revenues – Clinical Services

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 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 January 31, 2020 and 2019, the contractual adjustment percentages, determined using current and historical reimbursement statistics, were 88.8% and 88.6%, respectively, of gross billings. During the six months ended January 31, 2020 and 2019, the contractual adjustment percentages, determined using current and historical reimbursements statistics, were 88.5% and 88.0%, 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 services revenues of approximately \$2.2 million for both the six months periods ended January 31, 2020 and 2019, and a change in the net accounts receivable of approximately \$0.5 million as of January 31, 2020.

Our clinical services 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

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 services and by products. Net receivables for Clinical Services are detailed by billing category and as a percent to its total net receivables. At January 31, 2020, and July 31, 2019, approximately 63% of the Company's net accounts receivable relates to its Clinical Laboratory Services business, which operates in the New York, New Jersey and Connecticut medical communities.

The accounts receivable balance for Life Science products includes \$0.9 million or 28% and \$1.2 million or 32% of foreign receivables as of January 31, 2020 and July 31, 2019, respectively.

Net accounts receivable

Billing category	As of January 31, 2020		As of July 31, 2019	
Clinical Services				
Third party payers	\$ 1,909	34%	\$ 2,956	44%
Patient self-pay	1,369	24	2,360	35
Medicare	1,631	29	910	13
HMO's	779	13	574	8
Total Clinical Services	5,688	100%	6,800	100%
Total Products	3,224		3,938	
Total accounts receivable	\$ 8,912		\$ 10,738	

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. As of January 31, 2020, approximately 17% of Clinical Labs receivables are from one payer.

Billing for clinical 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 Services 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 January 31, 2020	Total	%	Third Party Payers		Medicare	%	Self-Pay	%	HMO's	%
1-30 days	\$ 21,874	47	\$ 13,684	51	\$ 3,985	37	\$ 1,547	27	\$ 2,658	92
31-60 days	7,433	16	3,772	14	2,679	25	872	15	110	4
61-90 days	4,120	9	2,624	10	758	7	708	12	30	1
91-120 days	3,657	8	2,245	8	677	6	715	12	20	1
121-150 days	2,496	5	1,324	5	559	5	585	10	28	1
Greater than 150 days	6,829	15	3,321	12	2,101	20	1,378	24	29	1
Totals	\$ 46,409	100%	\$ 26,970	100%	\$ 10,759	100%	\$ 5,805	100%	\$ 2,875	100%

As of July 31, 2019	Total	%	Third Party Payers		Medicare	%	Self-Pay	%	HMO's	%
1-30 days	\$ 22,031	50	\$ 14,232	53	\$ 4,114	52	\$ 1,236	20	\$ 2,449	90
31-60 days	6,659	15	4,473	17	952	12	1,109	18	125	5
61-90 days	4,185	10	2,742	10	495	6	903	15	45	2
91-120 days	2,786	6	1,708	6	316	4	736	12	26	1
121-150 days	2,014	5	1,137	4	256	3	610	10	11	—
Greater than 150 days	6,007	14	2,684	10	1,709	22	1,563	25	51	2
Totals	\$ 43,682	100%	\$ 26,976	100%	\$ 7,842	100%	\$ 6,157	100%	\$ 2,707	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.

Leases - right of use assets and operating lease liabilities

The Company determines if an arrangement is or contains a lease at contract inception. The Company leases buildings, office space, patient service centers, and equipment primarily through operating leases, and equipment through a limited number of finance leases. Generally, a right-of-use asset, representing the right to use the underlying asset during the lease term, and a lease liability, representing the payment obligation arising from the lease, are recognized on the balance sheet at lease commencement based on the present value of the payment obligation. For operating leases, expense is recognized on a straight-line basis over the lease term. For finance leases, interest expense on the lease liability is recognized using the effective interest method and amortization of the right-of-use asset is recognized on a straight-line basis over the shorter of the estimated useful life of the asset or the lease term. Short-term leases with an initial term of 12 months or less are not recorded on the balance sheet; the Company recognizes lease expense for these leases on a straight-line basis over the lease term. The Company primarily uses its incremental borrowing rate in determining the present value of lease payments as the Company's leases generally do not provide an implicit rate. The Company has lease agreements with (i) right-of-use asset payments and (ii) non-lease components (i.e. payments related to maintenance fees, utilities, etc.,) which have generally been combined and accounted for as a single lease component.

Goodwill

Goodwill represents the excess of the cost of an acquisition over the fair value of the net assets acquired. 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, 2019) 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 January 31, 2020, 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 \$0.8 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 \$1.6 million on an annual basis.

Interest Rate Risk

As of January 31, 2020, we have fixed interest rate financing on a building mortgage and on equipment finance 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 were no changes in our internal control over financial reporting that occurred during the quarter ended January 31, 2020 that have materially affected, or are 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, 2019 filed with the Securities and Exchange Commission, other than as noted in Note 12 to the Consolidated Financial Statements as of January 31, 2020.

Item 1A. Risk Factors

There has 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, 2019.

Item 6. Exhibits

<u>Exhibit No.</u>	<u>Exhibit</u>
31.1	<u>Certification of Elazar Rabbani, Ph.D. pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</u>
31.2	<u>Certification of David Bench pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</u>
32.1	<u>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.</u>
32.2	<u>Certification of David Bench pursuant to 18 U.S.C. §1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.</u>
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: March 6, 2020

by: /s/ David Bench
Chief Financial Officer and Principal Accounting Officer

**CERTIFICATION PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Elazar Rabbani, Ph.D., certify that:

1. I have reviewed this quarterly report on Form 10-Q of Enzo Biochem, Inc. (the “registrant”).
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a – 15(e) and 15d – 15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and
5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: March 6, 2020

By: /s/ Elazar Rabbani, Ph.D.
Elazar Rabbani, Ph.D.
Chairman of the Board, Chief Executive Officer and Secretary

**CERTIFICATION PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, David Bench, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Enzo Biochem, Inc. (the "registrant").
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a – 15(e) and 15d – 15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 6, 2020

By: /s/ David Bench
David Bench
Chief Financial Officer and Principal Accounting Officer

**CERTIFICATION PURSUANT TO
TITLE 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report of Enzo Biochem, Inc., and Subsidiaries ("the Company") on Form 10-Q for the period ended January 31, 2020 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Elazar Rabbani, Ph.D., Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: March 6, 2020

By: /s/ Elazar Rabbani, Ph.D.
Elazar Rabbani, Ph.D.
Chairman of the Board, Chief Executive Officer and Director

**CERTIFICATION PURSUANT TO
TITLE 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report of Enzo Biochem, Inc., and Subsidiaries ("the Company") on Form 10-Q for the period ended January 31, 2020 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, David Bench, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: March 6, 2020

By: /s/ David Bench
David Bench
Chief Financial Officer and Principal Accounting Officer
