TRANSGENOMIC INC
Form 10-Q
November 14, 2016
Table of Contents

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

FORM 10-Q

(Mark One)
x QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended September 30, 2016
OR
o TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from _____ to _____
Commission File Number: 000-30975

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

Delaware	91-1789357
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
12325 Emmet Street, Omaha, Nebraska	68164
(Address of principal executive offices)	(Zip Code)

(402) 452-5400
(Registrant's telephone number, including area code)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes x No o
Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No o
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

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

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes o No x
As of October 31, 2016, the number of shares of common stock outstanding was 24,786,244.

Table of Contents

TRANSGENOMIC, INC.
INDEX

		Page No.
PART I.	FINANCIAL INFORMATION	3
Item 1.	Financial Statements	3
	Condensed Consolidated Balance Sheets at September 30, 2016 (Unaudited) and December 31, 2015	3
	Unaudited Condensed Consolidated Statements of Operations for the Three and Nine Months Ended September 30, 2016 and 2015	4
	Unaudited Condensed Consolidated Statements of Comprehensive Loss for the Three and Nine Months Ended September 30, 2016 and 2015	5
	Unaudited Condensed Consolidated Statements of Stockholders' Deficit for the Nine Months Ended September 30, 2016	6
	Unaudited Condensed Consolidated Statements of Cash Flows for the Nine Months Ended September 30, 2016 and 2015	7
	Notes to Unaudited Condensed Consolidated Financial Statements	8
Item 2.	Management's Discussion and Analysis of Financial Condition and Results of Operations	30
Item 3.	Quantitative and Qualitative Disclosures About Market Risk	37
Item 4.	Controls and Procedures	37
PART II.	OTHER INFORMATION	38
Item 1.	Legal Proceedings	38
Item 1A.	Risk Factors	38
Item 6.	Exhibits	48
Signatures		49

Table of Contents

PART I. FINANCIAL INFORMATION
Item 1. Financial Statements
TRANSGENOMIC, INC. AND SUBSIDIARY
CONDENSED CONSOLIDATED BALANCE SHEETS
(Dollars in thousands, except per share data)

	September 30, 2016 (unaudited)	December 31, 2015
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 71	$ 444
Accounts receivable, net	180	264
Inventories, net	36	50
Other current assets	314	537
Assets held for sale	265	1,987
Total current assets	866	3,282
PROPERTY AND EQUIPMENT:		
Equipment	5,592	5,593
Furniture, fixtures & leasehold improvements	1,565	1,565
	7,157	7,158
Less: accumulated depreciation	(6,985)	(6,899)
	172	259
OTHER ASSETS:		
Intangibles, net	982	1,170
Other assets	58	105
	$ 2,078	$ 4,816
LIABILITIES AND STOCKHOLDERS' DEFICIT		
CURRENT LIABILITIES:		
Current maturities of long-term debt	$ 7,814	$ 7,596
Accounts payable	6,273	3,781
Accrued compensation	225	321
Accrued expenses	2,704	3,734
Deferred revenue	176	217
Other liabilities	1,068	1,068
Liabilities held for sale	—	264
Total current liabilities	18,260	16,981
LONG TERM LIABILITIES:		
Common stock warrant liability	1,430	350
Other long-term liabilities	212	305
Total liabilities	19,902	17,636
STOCKHOLDERS' DEFICIT:		
Convertible preferred stock, $0.01 par value, 15,000,000 shares authorized, 214,705 and 4,029,502 shares issued and outstanding, respectively	2	40
Common stock, $0.01 par value, 150,000,000 shares authorized, 24,139,130 and 13,915,691 shares issued and outstanding, respectively	241	139
Additional paid-in capital	201,522	200,403
Accumulated other comprehensive income	—	10
Accumulated deficit	(219,589)	(213,412)
Total stockholders' deficit	(17,824)	(12,820)

	$ 2,078	$ 4,816

See notes to unaudited condensed consolidated financial statements.

Table of Contents

TRANSGENOMIC, INC. AND SUBSIDIARY
UNAUDITED CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(Dollars in thousands, except per share data)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
NET SALES	$457	$ 330	$1,198	$ 1,522
COST OF GOODS SOLD	430	445	1,477	1,375
Gross profit	27	(115)	(279)	147
OPERATING EXPENSES:				
Selling, general and administrative	1,252	1,686	4,392	5,398
Research and development	393	455	1,065	1,374
	1,645	2,141	5,457	6,772
OPERATING LOSS FROM CONTINUING OPERATIONS	(1,618)	(2,256)	(5,736)	(6,625)
OTHER INCOME (EXPENSE):				
Interest expense, net	(285)	(174)	(782)	(550)
Warrant revaluation	12	385	357	(30)
Other, net	(1)	(6)	(1)	(19)
	(274)	205	(426)	(599)
LOSS FROM CONTINUING OPERATIONS BEFORE INCOME TAXES	(1,892)	(2,051)	(6,162)	(7,224)
INCOME TAX BENEFIT	—	—	—	(1)
LOSS FROM CONTINUING OPERATIONS	(1,892)	(2,051)	(6,162)	(7,223)
LOSS FROM DISCONTINUED OPERATIONS, NET OF TAXES	(34)	(5,248)	(25)	(6,392)
NET LOSS	(1,926)	(7,299)	(6,187)	(13,615)
PREFERRED STOCK DIVIDENDS	—	(331)	(21)	(993)
NET LOSS FROM CONTINUING OPERATIONS AVAILABLE TO COMMON STOCKHOLDERS	(1,892)	(2,382)	(6,183)	(8,216)
NET LOSS FROM DISCONTINUED OPERATIONS AVAILABLE TO COMMON STOCKHOLDERS	(34)	(5,248)	(25)	(6,392)
NET LOSS AVAILABLE TO COMMON STOCKHOLDERS	$(1,926)	$ (7,630)	$(6,208)	$ (14,608)
BASIC AND DILUTED LOSS PER COMMON SHARE FROM CONTINUING OPERATIONS	$(0.08)	$ (0.17)	$(0.28)	$ (0.70)
BASIC AND DILUTED LOSS PER COMMON SHARE FROM DISCONTINUED OPERATIONS	$—	$ (0.38)	$—	$ (0.54)
BASIC AND DILUTED LOSS PER COMMON SHARE	$(0.08)	$ (0.55)	$(0.28)	$ (1.24)
BASIC AND DILUTED WEIGHTED-AVERAGE SHARES OF COMMON STOCK OUTSTANDING	23,551,869	13,763,240	21,896,943	11,784,583

See notes to unaudited condensed consolidated financial statements.

Table of Contents

TRANSGENOMIC, INC. AND SUBSIDIARY
UNAUDITED CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS
(Dollars in thousands)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2016	2015	2016	2015
Net Loss	$(1,926)	$(7,299)	$(6,187)	$(13,615)
Other comprehensive loss - foreign currency translation adjustment	—	(22)	—	(14)
Comprehensive Loss	$(1,926)	$(7,321)	$(6,187)	$(13,629)

See notes to unaudited condensed consolidated financial statements.

Table of Contents

TRANSGENOMIC, INC. AND SUBSIDIARY
UNAUDITED CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' DEFICIT
Nine Months Ended
September 30, 2016
(Dollars in thousands, except share data)

	Preferred Stock		Common Stock					
	Outstanding Shares	Par Value	Outstanding Shares	Par Value	Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Income	Total
Balance, December 31, 2015	4,029,502	$ 40	13,915,691	$ 139	$ 200,403	$ (213,412)	$ 10	$ (12,820)
Net loss	—	—	—	—	—	(6,187)	—	(6,187)
Foreign currency translation adjustment	—	—	—	—	—	10	(10)	—
Stock-based compensation	—	—	—	—	140	—	—	140
Issuance of common shares	—	—	1,292,722	12	488	—	—	500
Private placement, net	2,365,243	24	—	—	519	—	—	543
Dividends on preferred stock	—	—	—	—	(4,475)	—	—	(4,475)
Conversion of preferred stock and preferred stock dividends	(6,180,040)	(62)	8,930,717	90	4,447	—	—	4,475
Balance, September 30, 2016	214,705	$ 2	24,139,130	$ 241	$ 201,522	$ (219,589)	$ —	$ (17,824)

See notes to unaudited condensed consolidated financial statements.

Table of Contents

TRANSGENOMIC, INC. AND SUBSIDIARY
UNAUDITED CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Dollars in thousands)

	Nine Months Ended September 30,	
	2016	2015
CASH FLOWS USED IN OPERATING ACTIVITIES:		
Net loss	$(6,187)	$(13,615)
Less loss from discontinued operations, net of tax	(25)	(6,392)
Loss from continuing operations	(6,162)	(7,223)
Adjustments to reconcile net loss to net cash flows used in operating activities:		
Depreciation and amortization	264	343
Stock-based compensation	111	489
Provision for losses on doubtful accounts	72	—
Warrant revaluation	(357)	30
Loss on sale of fixed assets	—	14
Deferred interest	47	61
Deferred tax provision	—	—
Changes in operating assets and liabilities:		
Accounts receivable	12	158
Inventories	14	—
Other current assets	280	(214)
Accounts payable	2,492	(162)
Accrued expenses and other liabilities	(728)	78
Net cash used in continuing operations	(3,955)	(6,426)
Net cash provided by (used in) discontinued operations	381	(3,010)
Net cash used in operating activities	(3,574)	(9,436)
CASH FLOWS PROVIDED BY (USED IN) INVESTING ACTIVITIES:		
Purchases of property and equipment	(19)	(280)
Other assets	(27)	(9)
Net cash used in continuing operations	(46)	(289)
Net cash provided by discontinued operations	1,052	1,910
Net cash provided by investing activities	1,006	1,621
CASH FLOWS PROVIDED BY FINANCING ACTIVITIES:		
Principal payments on capital lease obligations	(2)	(35)
Issuance of preferred stock, net	1,779	—
Issuance of common stock, net	468	8,977
Proceeds from borrowings	500	923
Principal payment on note payable	(550)	(874)
Net cash flows provided by financing activities	2,195	8,991
EFFECT OF FOREIGN CURRENCY EXCHANGE RATE CHANGES ON CASH	—	2
NET CHANGE IN CASH AND CASH EQUIVALENTS	(373)	1,178
CASH AND CASH EQUIVALENTS AT BEGINNING OF PERIOD	444	1,609
CASH AND CASH EQUIVALENTS AT END OF PERIOD	$71	$2,787
SUPPLEMENTAL CASH FLOW INFORMATION		
Cash paid during the period for:		
Interest	$—	$365

See notes to unaudited condensed consolidated financial statements.

Table of Contents

TRANSGENOMIC, INC. AND SUBSIDIARY
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
Three and Nine Months Ended September 30, 2016 and 2015

1. BUSINESS DESCRIPTION
Business Description.

Transgenomic, Inc. (“we”, “us”, “our”, the “Company” or “Transgenomic”) is a biotechnology company advancing personalize medicine for the detection and treatment of cancer and inherited diseases through our proprietary molecular technologies and clinical and research services. A key goal is to bring our Multiplexed ICE COLD-PCR (“MX-ICP”) product to the clinical market through strategic partnerships and licensing agreements, enabling the use of blood and other bodily fluids for more effective and patient-friendly diagnosis, monitoring and treatment of cancer.

MX-ICP is technology proprietary to Transgenomic. It is a reagent that improves the ability to detect genetic mutations. This technology has been validated internally on all currently available sequencing platforms, including Sanger, Next Gen Sequencing and Digital PCR. By enhancing the level of detection of genetic mutations and suppressing the normal or wild-type DNA, several benefits are provided.

Historically, our operations were organized and reviewed by management along our major product lines and presented in two business segments: Laboratory Services and Genetic Assays and Platforms. Beginning with the quarter ended September 30, 2015, our operations are now organized as one business segment, our Laboratory Services segment, and during the second half of 2015, we began presenting our Genetic Assays and Platforms segment and a portion of our Laboratory Services segment in discontinued operations.

Our current Laboratory Services business consists of our laboratory in Omaha, Nebraska, which is focused on providing genetic analytical services related to Oncology and pharmacogenomics research services supporting Phase II and Phase III clinical trials conducted by pharmaceutical and biotechnology companies. Our laboratory employs a variety of genomic testing service technologies, including our proprietary MX-ICP technology. Our laboratory in Omaha is certified under the Clinical Laboratory Improvement Amendments (“CLIA”) as a high complexity laboratory and is accredited by the College of American Pathologists.

Our condensed consolidated balance sheets, statements of operations and statements of cash flows for all periods presented reflect our former Genetic Assays and Platforms activities and Patient Testing business as discontinued operations (See Note 3 - “Discontinued Operations”).

Going Concern.

The condensed consolidated financial statements have been prepared using accounting principles generally accepted in the United States of America (“GAAP”) applicable for a going concern, which assume that we will realize our assets and discharge our liabilities in the ordinary course of business. We have incurred substantial operating losses and have used cash in our operating activities for the past few years. As of September 30, 2016, we had negative working capital of $17.4 million. Our ability to continue as a going concern is dependent upon a combination of generating additional revenue, improving cash collections, potentially selling underutilized assets and, if necessary, raising additional financing to meet our obligations and pay our liabilities arising from normal business operations when they come due. The outcome of these matters cannot be predicted with any certainty at this time and raises substantial doubt that we will be able to continue as a going concern. These condensed consolidated financial statements do not include any adjustments to the amounts and classification of assets and liabilities that may be necessary should we be unable to continue as a going concern. We cannot be certain that additional financing will be available on acceptable

terms, or at all, and our failure to raise capital when needed could limit our ability to continue our operations.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation.

The accompanying condensed consolidated financial statements are presented in conformity with GAAP. All amounts are presented in U.S. Dollars (“$”). Supplemental cash flows from discontinued operations are presented in Note 3 - “Discontinued Operations”. We have evaluated events occurring subsequent to September 30, 2016 for potential recognition or disclosure in the consolidated financial statements and concluded there were no subsequent events that required recognition or disclosure.

Table of Contents
TRANSGENOMIC, INC. AND SUBSIDIARY
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
Three and Nine Months Ended September 30, 2016 and 2015

The condensed consolidated balance sheet as of December 31, 2015 was derived from our audited balance sheet as of that date. There has been no change in the balance sheet from December 31, 2015. The accompanying condensed consolidated financial statements as of and for the three and nine months ended September 30, 2016 and 2015 are unaudited and reflect all adjustments (consisting of only normal recurring adjustments) that are, in the opinion of management, necessary for a fair presentation of the financial position and operating results for the interim periods. These unaudited condensed consolidated financial statements and notes should be read in conjunction with the audited consolidated financial statements and notes thereto for the year ended December 31, 2015 contained in our Annual Report on Form 10-K, filed with the Securities and Exchange Commission (the "SEC") on April 14, 2016. The results of operations for the interim periods presented are not necessarily indicative of the results for fiscal year 2016.

Certain prior year amounts have been reclassified to conform to the current year presentation in our condensed consolidated financial statements, which consists of the effects of reclassifications from the presentation of our discontinued operations.

Principles of Consolidation.

The condensed consolidated financial statements include the accounts of Transgenomic, Inc. and our wholly owned subsidiary. All inter-company balances and transactions have been eliminated in consolidation.

Risks and Uncertainties.

Certain risks and uncertainties are inherent in our day-to-day operations and in the process of preparing our financial statements. The more significant of those risks are presented below and throughout the notes to the unaudited condensed consolidated financial statements.

Use of Estimates.

The preparation of condensed consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of net sales and expenses during the reporting period. In addition, estimates and assumptions associated with the determination of the fair value of certain assets and related impairments require considerable judgment by management. Actual results could differ from the estimates and assumptions used in preparing these condensed consolidated financial statements.

Fair Value.

Unless otherwise specified, book value approximates fair market value. The common stock warrant liability is recorded at fair value. See Note 9 - "Fair Value" for additional information.

Cash and Cash Equivalents and Other Current Assets.

Cash and cash equivalents include cash and investments with original maturities at the date of acquisition of three months or less. Other current assets as of September 30, 2016 of $0.3 million include prepaid assets of $0.1 million and other receivables of $0.2 million.

Concentrations of Cash.

From time to time, we may maintain a cash position with financial institutions in amounts that exceed federally insured limits. We have not experienced any losses on such accounts as of September 30, 2016.

Accounts Receivable.

The following is a summary of activity for the allowance for doubtful accounts from continuing operations during the three and nine months ended September 30, 2016 and 2015:

Table of Contents
TRANSGENOMIC, INC. AND SUBSIDIARY
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
Three and Nine Months Ended September 30, 2016 and 2015

	Dollars in Thousands			
	Beginning Balance	Additions	Deductions	Ending Balance
Three Months Ended September 30, 2016	$157	$ 2	$ (19)	$ 140
Three Months Ended September 30, 2015	$20	$ 50	$ —	$ 70
Nine Months Ended September 30, 2016	$87	$ 72	$ (19)	$ 140
Nine Months Ended September 30, 2015	$20	$ 50	$ —	$ 70

While payment terms are generally 30 days, we have also provided extended payment terms in certain cases. Accounts receivable are carried at original invoice amount and shown net of allowance for doubtful accounts. The estimate made for doubtful accounts is based on a review of all outstanding amounts on a quarterly basis. We determine the allowance for doubtful accounts by regularly evaluating individual payor receivables and considering a payor's financial condition, credit history, reimbursement rates and current economic conditions. Accounts receivable are written off when deemed uncollectible and after all collection efforts have been exhausted. Recoveries of accounts receivable previously written off are recorded as a reduction in bad debt expense when received.

Inventories.

Inventories are stated at the lower of cost or market net of allowance for obsolete inventory. Cost is computed using standard costs for finished goods and average or latest actual cost for raw materials and work in process, which approximates the first-in, first-out (FIFO) method. At September 30, 2016, our net inventories were less than $0.1 million and were comprised predominantly of raw materials.

The following is a summary of activity for the allowance for obsolete inventory during the three and nine months ended September 30, 2016 and 2015:

	Dollars in Thousands			
	Beginning Balance	Additions	Deductions	Ending Balance
Three Months Ended September 30, 2016	$63	$ —$	—$	63
Three Months Ended September 30, 2015	$—	$ —$	—$	—
Nine Months Ended September 30, 2016	$63	$ —$	—$	63
Nine Months Ended September 30, 2015	$—	$ —$	—$	—

We determine the allowance for obsolescence by evaluating inventory quarterly for items deemed to be slow moving or obsolete.

Property and Equipment.

Property and equipment are carried at cost less accumulated depreciation. Depreciation is computed using the straight-line method over the estimated useful lives of the related assets as follows:

Leasehold improvements	1 to 10 years
Furniture and fixtures	3 to 7 years
Production equipment	3 to 7 years
Computer equipment	3 to 7 years
Research and development equipment	2 to 7 years

Depreciation expense in continuing operations related to property and equipment was less than $0.1 million for each of the three month periods ended September 30, 2016 and 2015. Depreciation expense was $0.1 million and $0.2 million for the nine month periods ended September 30, 2016 and 2015, respectively. Depreciation expense during each period includes depreciation related to equipment acquired under capital leases.

Intangible Assets.

Intangible assets include intellectual property and patents.

Table of Contents
TRANSGENOMIC, INC. AND SUBSIDIARY
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
Three and Nine Months Ended September 30, 2016 and 2015

1. Intellectual Property. Initial costs paid to license intellectual property from independent third parties are capitalized and amortized using the straight-line method over the license period. Ongoing royalties related to such licenses are expensed as incurred.
2. Patents. We capitalize legal costs, filing fees and other expenses associated with obtaining patents on new discoveries and amortize these costs using the straight-line method over the shorter of the legal life of the patent or its economic life beginning on the date the patent is issued.
Stock-Based Compensation.
All stock-based awards to date have exercise prices equal to the market value of the shares at the date of grant and have 10-year contractual terms. Unvested awards as of September 30, 2016 had vesting periods of up to three years from the date of grant. None of the awards outstanding at September 30, 2016 are subject to performance or market-based vesting conditions.
We measure and recognize compensation expense for all stock-based awards made to employees and directors. Compensation expense, net of estimated forfeitures, is based on the calculated fair value of the awards as measured at the grant date and is expensed over the service period of the awards.
During the three and nine months ended September 30, 2016, we recorded compensation expense for all stock awards of zero and $0.1 million, respectively, within selling, general and administrative expense. During the three and nine months ended September 30, 2015, we recorded compensation expense for all stock awards of $0.2 million and $0.5 million, respectively. As of September 30, 2016, the unrecognized compensation expense related to unvested stock awards was $0.1 million, which is expected to be recognized over a weighted-average period of 1.1 years.
We granted stock options to purchase an aggregate of 11,250 and 25,250 shares of our common stock during the three and nine months ended September 30, 2016, respectively. The fair value of the stock options granted during the year was estimated on the grant date using the Black-Scholes option pricing model with the following assumptions: risk-free interest rates of 1.56% based on the U.S. Treasury yield in effect at the time of grant; dividend yields of zero percent; expected lives of 6.00 years, based on expected exercise activity behavior; and volatility of 85% based on the historical volatility of our common stock over a time that is consistent with the expected life of the options.
Included in our stock awards outstanding as of September 30, 2016 were stock appreciation rights (“SARs”) to purchase 98,333 shares of our common stock. The SARs were issued solely to our executive officers and will vest over three years from the date of grant.
Net Sales Recognition.
Revenue is realized and earned when all of the following criteria are met:
- Persuasive evidence of an arrangement exists;
- Delivery has occurred or services have been rendered;
- The seller’s price to the buyer is fixed or determinable; and
- Collectability is reasonably assured.

In our Biomarker Identification laboratory, we perform services on a project by project basis. When we receive payment in advance, we initially defer the revenue and recognize it when we deliver the service. These projects typically do not extend beyond one year. At each of September 30, 2016 and December 31, 2015, deferred net sales associated with pharmacogenomics research projects included in the balance sheet in deferred revenue was $0.2 million.

Net sales from Patient Testing laboratories, reported as part of discontinued operations, are recognized on an individual test basis and take place when the test report is completed, reviewed and sent to the client less the reserve for insurance, Medicare and Medicaid contractual adjustments. There are no deferred net sales associated with our Patient Testing services. Adjustments to the allowances, based on actual receipts from third party payers, are reflected

in the estimated contractual allowance applied prospectively. In the fourth quarter of 2015, we adjusted our contractual allowance rates to better reflect the reimbursement level we expect to achieve on Patient Testing billings. The adjustment negatively impacted our Patient Testing revenues for all periods after the third quarter of 2015. (See Note 3 - “Discontinued Operations”).

Net sales of Genetic Assays and Platforms products, reported as discontinued operations (See Note 3 - “Discontinued Operations”) are recognized in accordance with the terms of the sales arrangement. Such recognition is based on receipt of an

unconditional customer order and transfer of title and risk of ownership to the customer, typically upon shipment of the product under a purchase order. Our sales terms do not provide for the right of return unless the product is damaged or defective. Net sales from certain services associated with the analytical instruments, to be performed subsequent to shipment of the products, is deferred and recognized when the services are provided. Such services, mainly limited to installation and training services that are not essential to the functionality of the instruments, typically are performed in a timely manner subsequent to shipment of the instrument. We also enter into various service contracts that cover installed instruments. These contracts cover specific time periods and net sales associated with these contracts are deferred and recognized ratably over the service period.

Common Stock Warrants.

Certain of our issued and outstanding warrants to purchase common stock do not qualify to be treated as equity and, accordingly, are recorded as a liability ("Common Stock Warrant Liability"). We are required to present these instruments at fair value at each reporting date and any changes in fair values are recorded as an adjustment to earnings. The Common Stock Warrant Liabilities are considered Level Three financial instruments for purposes of fair value measurement. See Note 9 - "Fair Value" for additional information.

Loss Per Share.

Basic loss per share is calculated based on the weighted-average number of common shares outstanding during each period. Diluted loss per share includes shares issuable upon exercise of outstanding stock options, warrants or conversion rights that have exercise or conversion prices below the market value of our common stock. Options, warrants and conversion rights pertaining to 10,701,453 and 10,392,728 shares of our common stock have been excluded from the computation of diluted loss per share at September 30, 2016 and 2015, respectively, because the effect is anti-dilutive due to the net loss.

Recent Accounting Pronouncements.

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2014-09, Revenue from Contracts with Customers ("ASU No. 2014-09"). This guidance requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to a customer. ASU No. 2014-09 will replace most existing revenue recognition guidance in GAAP when it becomes effective. In July 2015, the FASB decided to defer the effective date of this new accounting guidance by one year. As a result, ASU No. 2014-09 will be effective for us for all annual and interim reporting periods beginning after December 15, 2017 and early adoption would be permitted as of the original effective date. The new standard permits the use of either the retrospective or cumulative effect transition method. We do not expect to early adopt this guidance and we have not selected a transition method. We are currently evaluating the impact this guidance will have on our financial condition, results of operations and cash flows.

In August 2014, the FASB issued ASU No. 2014-15, Presentation of Financial Statements - Going Concern (Subtopic 205-40)("ASU No. 2014-15"). This guidance addresses management's responsibility to evaluate whether there is substantial doubt about an entity's ability to continue as a going concern and to provide related footnote disclosures. The standard will be effective for the first interim period within annual reporting periods beginning after December 15, 2016. Early adoption is permitted. We do not expect to early adopt this guidance and do not believe that the adoption of this guidance will have a material impact on our consolidated financial statements.

In February 2016, the FASB issued ASU No. 2016-02, Leases. The new standard amends the recognition of lease assets and lease liabilities by lessees for those leases currently classified as operating leases and amends disclosure requirements associated with leasing arrangements. The new standard is effective for fiscal years and interim periods within those fiscal years beginning after December 15, 2018. Early adoption is permitted. The new standard must be adopted using a modified retrospective transition, and provides for certain practical expedients. Transition will require

application of the new guidance at the beginning of the earliest comparative period presented. We are currently assessing the impact that the adoption of this ASU will have on our consolidated financial statements.

In March 2016, the FASB issued ASU No. 2016-09, Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting. The new standard simplifies several aspects related to the accounting for share-based payment transactions, including the accounting for income taxes, statutory tax withholding requirements, forfeitures and classification on the statement of cash flows. This guidance is effective for fiscal years and interim periods within those fiscal years beginning after December 15, 2016; however, early adoption is permitted. We do not expect to early adopt this guidance and are currently evaluating the impact this guidance will have on our financial condition, results of operations and cash flows.

Table of Contents
TRANSGENOMIC, INC. AND SUBSIDIARY
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
Three and Nine Months Ended September 30, 2016 and 2015

3. DISCONTINUED OPERATIONS

On September 8, 2015, we entered into an Asset Purchase Agreement (the "Asset Purchase Agreement") with Edge BioSystems, Inc. ("Edge Bio"), pursuant to which we sold our manufacturing, marketing and selling of high quality polymer and silica based beads and resin and chromatography columns business (collectively, the "Columns Business"). The Columns Business was part of our former segment, Genetic Assays and Platforms. Pursuant to the Asset Purchase Agreement, Edge Bio acquired substantially all of the assets used solely in connection with the Columns Business and assumed certain liabilities of the Columns Business for a total cash purchase price of approximately $2.1 million (the "Asset Sale"), which was paid on September 8, 2015 upon the closing of the Asset Sale. During the year ended December 31, 2015, we recorded a gain on the sale of the Columns Business of $1.5 million.

On November 25, 2015, we entered into an Asset Purchase Agreement (the "Purchase Agreement") with ADSTEC Corporation ("ADSTEC") and ADS Biotec Inc., a wholly-owned subsidiary of ADSTEC ("Buyer"), pursuant to which we sold (1) to ADSTEC our facilities located in Glasgow, Scotland and on Irvington Road in Omaha, Nebraska (together, the "Facilities") and all of our stock, inventory and raw materials located at the Facilities (collectively, the "Inventory"), and (2) to Buyer (a) all of the remaining assets relating to our Genetic Assays and Platforms business segment (the "Business"), other than the Inventory (the "Purchased Assets"), and (b) all of the ordinary shares of Transgenomic Limited, a wholly-owned subsidiary of ours (the "Shares").

Pursuant to the Purchase Agreement, ADSTEC and Buyer acquired the Facilities, the Inventory, the Purchased Assets and the Shares for an aggregate purchase price of approximately $300,000, and Buyer assumed our financial and human resources commitments related to the Business (the "Transaction"). During the year ended December 31, 2015, we recorded a loss on the Transaction of $1.7 million.

Together, the Asset Sale and the Transaction represent the divestiture of our Genetic Assays and Platforms business, resulting in a strategic shift that had a major effect on our operations and financial results. Therefore, the divested operations of our Genetic Assays and Platforms business meet the criteria to be reported as discontinued operations. During the fourth quarter of 2015, our Board of Directors took actions to begin the process of divesting our Patient Testing business in New Haven, Connecticut. In March 2016, we announced that we had suspended testing services in our Patient Testing laboratory as we review and evaluate various strategic alternatives for that business. As a result of these actions, as of December 31, 2015, our Patient Testing business met the criteria to be reported as discontinued operations. We anticipate that we will complete the divestiture of the Patient Testing business during 2016.
The related assets, liabilities, results of operations and cash flows for both the Genetic Assays and Platforms business and Patient Testing business are classified as assets held for sale, liabilities held for sale and discontinued operations for all periods presented.

Table of Contents
TRANSGENOMIC, INC. AND SUBSIDIARY
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
Three and Nine Months Ended September 30, 2016 and 2015

Results of the discontinued operations consisted of the following:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2016	2015	2016	2015
Net sales	$283	$5,507	$1,960	$17,868
Cost of goods sold	57	3,203	1,251	9,980
Gross profit	226	2,304	709	7,888
Selling, general and administrative expense	252	1,910	1,621	8,325
Research and development expense	98	106	166	330
Impairment of long-lived assets	—	7,024	—	7,024
Operating income (loss) from discontinued operations	(124)	(6,736)	(1,078)	(7,791)
Gain on sale of business/assets	90	1,532	1,053	1,532
Income (loss) from discontinued operations before income taxes	(34)	(5,204)	(25)	(6,259)
Income tax expense	—	44	—	133
Income (loss) from discontinued operations, net of taxes	$(34)	$(5,248)	$(25)	$(6,392)

The loss from discontinued operations for the nine month period ended September 30, 2016, includes approximately $1.1 million in proceeds received from the sale of assets of our discontinued Patient Testing business.
Assets and liabilities of the discontinued operations are classified as assets held for sale and liabilities held for sale in the condensed consolidated balance sheets and consisted of the following:

	Dollars in Thousands	
	September 30, 2016	December 31, 2015
ASSETS		
Accounts receivable, net	$244	$ 1,905
Other current assets	21	82
Total Assets	$265	$ 1,987
LIABILITIES		
Accrued compensation	$—	$ 264
Total Liabilities	$—	$ 264

The following is a summary of activity for the allowance for doubtful accounts from discontinued operations during the three and nine months ended September 30, 2016 and 2015. The allowance for doubtful accounts from discontinued operations is included in the assets held for sale in the condensed consolidated balance sheets.

Table of Contents
TRANSGENOMIC, INC. AND SUBSIDIARY
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
Three and Nine Months Ended September 30, 2016 and 2015

	Dollars in Thousands			
	Beginning Balance	Additions	Deductions	Ending Balance
Three Months Ended September 30, 2016	$10,462	$ —	$ (5,192)	$5,270
Three Months Ended September 30, 2015	$8,406	$ 1,052	$ (168)	$9,290
Nine Months Ended September 30, 2016	$14,664	$ —	$ (9,394)	$5,270
Nine Months Ended September 30, 2015	$7,927	$ 3,782	$ (2,419)	$9,290

4. INTANGIBLES AND OTHER ASSETS

We review our amortizable long-lived assets for impairment annually or whenever events indicate that the carrying amount of the asset (group) may not be recoverable. An impairment loss may be needed if the sum of the future undiscounted cash flows is less than the carrying amount of the asset (group). The amount of the loss would be determined by comparing the fair market value of the asset to the carrying amount of the asset (group).

Long-lived intangible assets as of September 30, 2016 and December 31, 2015 consisted of the following:

	Dollars in Thousands		
	September 30, 2016		
	Cost	Accumulated Amortization	Net Book Value
Patents	680	80	600
Intellectual property	672	290	382
	$1,352	$ 370	$ 982

	Dollars in Thousands		
	December 31, 2015		
	Cost	Accumulated Amortization	Net Book Value
Patents	980	274	706
Intellectual property	671	207	464
	$1,651	$ 481	$ 1,170

	Estimated Useful Life
Patents	Life of the patent
Intellectual property	7 years

Other assets include U.S. security deposits and deferred tax assets, net of applicable valuation allowances.

Amortization expense for intangible assets was $0.2 million and $0.1 million during the nine month periods ended September 30, 2016 and 2015, respectively. Amortization expense for intangible assets is expected to be $0.1 million for each of the years ending December 31, 2016, 2017, 2018, 2019 and 2020.

15

Table of Contents
TRANSGENOMIC, INC. AND SUBSIDIARY
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
Three and Nine Months Ended September 30, 2016 and 2015

5. DEBT

	Dollars in Thousands	
	September 30, 2016	December 31, 2015
Revolving Line of Credit[1]	$ 3,243	$ 3,025
Term Loan[2]	4,000	4,000
Convertible Promissory Notes [3]	571	571
Total debt	7,814	7,596
Current portion of long-term debt	(7,814)	(7,596)
Long-term debt, net of current maturities	$ —	$ —

(1) Revolving Line of Credit. Amounts advanced under the Revolving Line accrue interest at an annual rate equal to the greater of (a) 6.25% or (b) the Wall Street Journal prime rate plus 3%. The current interest rate is 6.50%. Interest is payable on a monthly basis, with the balance payable at the maturity of the Revolving Line. Under the Loan Agreement, we pay the Lenders a commitment fee of $20,000 on each one-year anniversary of March 13, 2013, the Effective Date, during the term of the Revolving Line. In addition, a fee of 0.5% per annum is payable quarterly on the unused portion of the Revolving Line. The Revolving Line matures on November 1, 2017.

(2) Term Loan. We received $4.0 million under the Term Loan on the Effective Date. Pursuant to the terms of the Loan Agreement, as amended, the maturity date of the Loan Agreement was extended until November 1, 2017 and no principal payments on the Term Loan are due until such date. The current interest rate is 9.1%.

We will pay the Lenders an additional final payment of $120,000 at maturity or prepayment of the Term Loan. In addition, if we repay the Term Loan prior to maturity, we will pay the Lenders a prepayment penalty of 1% of the total outstanding balance under the Term Loan.

Additional Terms.
The Loan Agreement contains affirmative and negative covenants. Under the Term Loan, we agreed not to (i) pledge or otherwise encumber our assets other than to the Lenders, (ii) enter into additional borrowings or guarantees, (iii) repurchase our capital stock, or (iv) enter into certain mergers or acquisitions without the Lenders' consent. Additionally, the Loan Agreement contains a subjective acceleration clause at the discretion of the Lenders. As of September 30, 2016, we were not in compliance with the Loan Agreement, as amended by the Ninth Amendment, due to the fact that we did not make the required monthly interest payments during the third quarter and have not received a waiver for the non-compliance and as such all debt has been classified as current at September 30, 2016.

To secure the repayment of any amounts borrowed under the Revolving Line and the Term Loan, we granted the Lenders a security interest in all of our assets. The occurrence of an event of default under the Loan Agreement could result in the acceleration of our obligations under the Loan Agreement, would increase the applicable interest rate under the Revolving Line or Term Loan (or both) by 5% and would permit the Lenders to exercise remedies with respect to the collateral under the Loan Agreement. As of the date these financials were available for release, the Lenders have not exercised the remedies under the Loan Agreement.

(3) Convertible Promissory Notes. The Notes accrue interest at a rate of 6% per year and mature on December 31, 2016.

Revolving Line and Term Loan.

On March 13, 2013 (the “Effective Date”), we entered into a Loan and Security Agreement with affiliates of Third Security, LLC (the “Lenders”) for (a) a revolving line of credit (the “Revolving Line”) with borrowing availability of up to $4.0 million, subject to reduction based on our eligible accounts receivable, and (b) a term loan (the “Term Loan” and, together with the Revolving Line, the “Loan Agreement”) of $4.0 million. Proceeds were used to pay off a three year senior secured promissory note payable to PGxHealth, LLC, which was entered into on December 29, 2010 in conjunction with our acquisition of the FAMILION family of genetic tests, and for general corporate and working capital purposes.

On August 2, 2013, we entered into an amendment to the Loan Agreement (the "Amendment"). The Amendment, which became effective as of June 30, 2013, reduced our future minimum revenue covenants under the Loan Agreement and modified the interest rates applicable to the amounts advanced under the Revolving Line.

On November 14, 2013, we entered into a second amendment to the Loan Agreement (the "Second Amendment"). The Second Amendment, which became effective as of October 31, 2013, reduced our future minimum revenue covenants under the Loan Agreement.

On January 27, 2014, we entered into a third amendment to the Loan Agreement (the "Third Amendment"). Pursuant to the Third Amendment, the Lenders agreed to waive certain events of default under the Loan Agreement, and the parties amended certain provisions of the Loan Agreement, including the minimum liquidity ratio that we must maintain during the term of the Loan Agreement.

On March 3, 2014, we entered into a fourth amendment to the Loan Agreement (the "Fourth Amendment"). Pursuant to the terms of the Fourth Amendment, we were not required to make any principal or interest payments under the Term Loan for the period from March 1, 2014 through March 31, 2015. The interest on the debt that was deferred and not paid was capitalized as part of the Term Loan. The amount of interest that was capitalized from March 1, 2014 to March 31, 2015 was $0.4 million.

On October 22, 2014, we entered into a fifth amendment to the Loan Agreement (the "Fifth Amendment"). Pursuant to the Fifth Amendment, the parties amended certain provisions of the Loan Agreement, including reducing the minimum liquidity and revenue covenants under the Loan Agreement. The Fifth Amendment also reduced the aggregate amount that we may borrow under the Revolving Line from $4.0 million to $3.0 million.

On April 1, 2015, we entered into a sixth amendment to the Loan Agreement (the "Sixth Amendment"). Pursuant to the Sixth Amendment, among other things, (a) the Lenders waived specified events of default under the terms of the Loan Agreement, (b) commencing April 1, 2015, we began making monthly interest payments with respect to the Term Loan to the Lenders, (c) we were not be obligated to make monthly payments of principal under the Term Loan to the Lenders until April 1, 2016, (d) we made an initial prepayment of a portion of the Term Loan balance in the amount of approximately $148,000 on April 1, 2015 and will make one or more additional prepayments to the Lenders under the Loan Agreement upon the occurrence of certain events, as defined in the Loan Agreement, and (e) we were not required to comply with the minimum liquidity ratio under the terms of the Loan Agreement until the earliest to occur of a specified event, as defined in the Loan Agreement, or March 31, 2016. The Sixth Amendment also extends the time period in which we must provide certain reports and statements to the Lenders and amends the circumstances pursuant to which we may engage in certain sales or transfers of our business or property without the consent of the Lenders.
As of June 30, 2015, we were in compliance with all financial covenants of the Loan Agreement, but were not in compliance with the restrictions limiting the amount that we may borrow under the Revolving Line. Accordingly, on August 10, 2015, we received a waiver from the Lenders relating to this non-compliance and paid the Lenders an aggregate of $0.7 million, which brought us back into compliance with the terms of the Revolving Line.

On September 4, 2015, we entered into a seventh amendment to the Loan Agreement (the "Seventh Amendment"). The Seventh Amendment, among other things, (a) provided that the Lenders waived specified events of default under the terms of the Loan Agreement, (b) reduced our future minimum revenue covenants under the Loan Agreement, (c) reduced our borrowing availability under the Revolving Line to approximately $2.3 million, and (d) limited our

borrowing base under the Loan Agreement to the amount of the Revolving Line.

On January 6, 2016, we entered into an eighth amendment to the Loan Agreement (the "Eighth Amendment"). The Eighth Amendment, among other things, (a) provided that the Lenders waived specified events of default under the terms of the Loan Agreement, (b) reduced our future minimum revenue covenants under the Loan Agreement, (c) extended the maturity date of the Loan Agreement until November 1, 2017, and (d) provided for the repayment of an overadvance of $750,000 previously provided by the Lenders to us pursuant to the Loan Agreement.

On June 6, 2016, we entered into a ninth amendment to the Loan Agreement (the "Ninth Amendment"). The Ninth Amendment, among other things, (a) provided that the Lenders waived specified events of default under the terms of the Loan Agreement, (b) amended the prepayment terms of the Loan Agreement, (c) provided for the reduction of amounts available under the Revolving Line upon the prepayment or repayment of certain amounts by us, (d) removed the minimum liquidity ratio and minimum net revenue financial covenants applicable to us under the Loan Agreement, (e) amended the circumstances pursuant to which we may

engage in certain sales or transfers of our business or property without the consent of the Lenders, and (f) capitalized certain amounts owed by us to the Lenders and added such overdue amounts to the outstanding principal amount of the Revolving Line.

As a result of the Ninth Amendment, the overadvance that existed at March 31, 2016 was added to the outstanding principal amount of the Revolving Line and no overadvance existed as of September 30, 2016.

Convertible Promissory Notes.

On December 31, 2014, we entered into an Unsecured Convertible Promissory Note Purchase Agreement (the "Note Purchase Agreement") with an accredited investor (the "Investor"), pursuant to which we agreed to issue and sell to the Investor in a private placement an unsecured convertible promissory note (the "Initial Note"). We issued the Initial Note in the aggregate principal amount of $750,000 to the Investor on December 31, 2014. Pursuant to the terms of the Initial Note, interest accrued at a rate of 6% per year and the Initial Note was set to mature on December 31, 2016. Under the Initial Note, the outstanding principal and unpaid interest accrued was convertible into shares of our common stock as follows: (i) commencing upon the date of issuance of the Initial Note (but no earlier than January 1, 2015), the Investor was entitled to convert, on a one-time basis, up to 50% of the outstanding principal and unpaid interest accrued under the Initial Note, into shares of our common stock at a conversion price equal to the lesser of (a) the average closing price of the common stock on the principal securities exchange or securities market on which our common stock is then traded (the "Market") for the 20 consecutive trading days immediately preceding the date of conversion, and (b) $2.20 (subject to adjustment for stock splits, stock dividends, other distributions, recapitalizations and the like); and (ii) commencing February 15, 2015, the Investor was entitled to convert, on a one-time basis, any or all of the remaining outstanding principal and unpaid interest accrued under the Initial Note, into shares of our common stock at a conversion price equal to 85% of the average closing price of our common stock on the Market for the 15 consecutive trading days immediately preceding the date of conversion. The Initial Note has been converted in full into 502,786 shares of our common stock, in accordance with the terms of the Initial Note.

On January 15, 2015, we entered into the Note Purchase Agreement with seven accredited investors (the "Additional Investors") and, on January 20, 2015, issued and sold to the Additional Investors, in a private placement, notes (the "Additional Notes") in an aggregate principal amount of $925,000. The Additional Notes have the same terms and conditions as the Initial Note. As of September 30, 2016, $400,000 of the aggregate principal amount of the Additional Notes, and accrued interest thereon, has been converted into an aggregate of 281,023 shares of our common stock.

6. COMMITMENTS AND CONTINGENCIES

We are subject to a number of claims of various amounts that arise out of the normal course of our business. In our opinion, the disposition of pending claims, in excess of recorded accruals, could have a material adverse effect on our financial position, results of operations or cash flows. On February 25, 2016, the Board of Regents of the University of Nebraska ("UNMC") filed a lawsuit against us in the District Court of Douglas County, Nebraska, for breach of contract and seeking recovery of $0.7 million owed by us to UNMC. We and UNMC are currently in discussions to determine a mutually agreeable means by which to settle the outstanding liability. A $0.7 million liability has been recorded at December 31, 2015 and September 30, 2016.

In addition, on April 13, 2016, Fox Chase Cancer Center ("Fox Chase") filed a lawsuit against us in the Court of Common Pleas of Philadelphia County, First Judicial District of Pennsylvania Civil Trial Division (the "Court of Common Pleas"), alleging, among other things, breach of contract, tortious interference with present and prospective

contractual relations, unjust enrichment, fraudulent conversion and conspiracy and seeking punitive damages in addition to damages and other relief. This lawsuit relates to a license agreement we entered into with Fox Chase in August 2000, as amended (the "License Agreement"), as well as the assignment of certain of our rights under the License Agreement to Integrated DNA Technologies, Inc. ("IDT") pursuant to the Surveyor Kit Patent, Technology and Inventory Purchase Agreement we entered into with IDT effective as of July 1, 2014 (the "IDT Agreement"). Pursuant to the terms of the IDT Agreement, we agreed to indemnify IDT with respect to certain of the claims asserted in the Fox Chase proceeding. On July 8, 2016, the Court of Common Pleas sustained our preliminary objections to several of Fox Chase's claims and dismissed the claims for tortious interference, fraudulent conversion, conspiracy, punitive damages and attorney's fees. Accordingly, the case has been narrowed so that only certain contract claims and an unjust enrichment claim remain pending against us. We believe that we have good and substantial defenses to the claims asserted by Fox Chase. We are unable to determine whether any loss will occur or to estimate the range of such potential loss; therefore, no amount of loss has been accrued by us as of the date of filing of this Quarterly Report on Form 10-Q. Furthermore, there is no guarantee that we will prevail in this suit or receive any damages or other relief if we do prevail.

On June 23, 2016, the Icahn School of Medicine at Mount Sinai ("Mount Sinai") filed a lawsuit against us in the Supreme Court of the State of New York, County of New York, alleging, among other things, breach of contract and, alternatively, unjust enrichment and quantum merit, and seeking recovery of $0.7 million owed by us to Mount Sinai for services rendered. We and Mount Sinai are currently in discussions to determine a mutually agreeable means by which to settle the outstanding liability. A $0.7 million liability has been recorded at December 31, 2015 and September 30, 2016.

The outcome of legal proceedings and claims brought against us are subject to significant uncertainty. Therefore, although management considers the likelihood of such an outcome to be remote, if one or more of these legal matters were resolved against us in the same reporting period for amounts in excess of management's expectations, our financial statements for such reporting period could be materially adversely affected. In general, the resolution of a legal matter could prevent us from offering our services or products to others, could be material to our financial condition or cash flows, or both, or could otherwise adversely affect our operating results.

We lease certain equipment, vehicles and operating facilities under non-cancellable operating leases that expire on various dates through 2022. The future minimum lease payments required under these leases are $0.2 million for the remainder of 2016, $0.7 million in 2017, $0.7 million in 2018, $0.7 million in 2019, $0.7 million in 2020 and $0.4 million thereafter. Rent expense for each of the nine month periods ended September 30, 2016 and 2015 was $0.2 million. At September 30, 2016, firm commitments to vendors totaled $0.1 million.

7. INCOME TAXES

Annually, we file U.S. Federal, state and foreign income tax returns. All U.S. Federal and most state loss carryforwards remain subject to adjustment in the event of an income tax examination.

Income tax expense from continuing operations was zero for the three and nine months ended September 30, 2016. Income tax expense was zero for the three months ended September 30, 2015 and for the nine months ended September 30, 2015, we had an income tax benefit of approximately one thousand dollars. We maintain a full valuation allowance on our net deferred tax assets, having concluded that we are not more likely than not going to realize the benefit of our deferred tax assets, including our net operating loss carryforwards.

During each of the three and nine month periods ended September 30, 2016 and 2015, there were no material changes to the liability for uncertain tax positions.

8. STOCKHOLDERS' EQUITY

Common Stock.

Pursuant to our Third Amended and Restated Certificate of Incorporation, as amended, we currently have 150,000,000 shares of common stock authorized for issuance.

On February 2, 2012, we entered into definitive agreements with institutional and other accredited investors and raised approximately $22.0 million in a private placement financing (the "Private Placement"), which included an aggregate of $3.0 million in convertible notes issued in December 2011 to entities affiliated with Third Security, LLC, a related party, that automatically converted into shares of our common stock and warrants to purchase such common stock on the same terms as all investors in the Private Placement. Pursuant to the purchase agreement, we issued an aggregate of 1,583,333 shares of our common stock at a price per share of $12.00, as well as five-year warrants to purchase up to an aggregate of 823,333 shares of our common stock with an exercise price of $15.00 per share. In connection with the conversion of the convertible notes issued by us to the entities affiliated with Third Security, LLC, the entities received an aggregate of 250,000 shares of our common stock and 125,000 warrants on the same terms as all investors in the Private Placement. Craig-Hallum Capital Group LLC ("Craig-Hallum") served as the sole placement agent for the

offering. In consideration for services rendered as the placement agent in the offering, we agreed to (a) pay to the placement agent cash commissions equal to $1,330,000, or 7.0% of the gross proceeds received in the offering; (b) issue to the placement agent a five-year warrant to purchase up to 31,666 shares of our common stock (representing 2% of the shares sold in the Private Placement) with an exercise price of $15.00 per share and other terms that are the same as the terms of the warrants issued in the Private Placement; and (c) reimburse the placement agent for reasonable out-of-pocket expenses, including fees paid to the placement agent's legal counsel, incurred in connection with the offering, which reimbursable expenses were not to exceed $125,000. The costs incurred to complete the Private Placement were recorded as a reduction in equity in the amount of $1.5 million. Net proceeds from this offering were used for general corporate and working capital purposes, primarily to accelerate development of several of our key initiatives.

On January 24, 2013, we entered into a Securities Purchase Agreement with certain institutional and other accredited investors pursuant to which we: (a) sold to the investors an aggregate of 1,383,333 shares of our common stock at a price per share of $6.00 for aggregate gross proceeds of approximately $8.3 million; and (b) issued to the investors warrants to purchase up to an aggregate of 691,655 shares of our common stock with an exercise price of $9.00 per share (the "2013 Offering"). The warrants may be exercised, in whole or in part, at any time from January 30, 2013 until January 30, 2018 and contain both cash and "cashless exercise" features. Affiliates of Third Security, LLC purchased an aggregate of 500,000 shares of common stock and warrants to purchase an aggregate of 250,000 shares of common stock in the 2013 Offering on the same terms as the other investors. Net proceeds from the 2013 Offering were used for general corporate and working capital purposes.

In connection with the 2013 Offering, we entered into a registration rights agreement with the investors (the "Registration Rights Agreement"). The Registration Rights Agreement required that we file with the SEC a registration statement to register for resale the shares of common stock sold and the shares of common stock issuable upon exercise of the warrants (the "Warrant Shares") by March 16, 2013. The registration statement was filed with the SEC on March 15, 2013 and was declared effective by the SEC on March 29, 2013.

The 2013 Offering required the repricing and issuance of additional common stock warrants to the holders of warrants issued in the Private Placement. The exercise price of the warrants decreased from $15.00 per share to $12.96 per share and the number of shares issuable upon exercise of the warrants increased from 948,333 to 1,097,600.

On October 22, 2014, we entered into a Securities Purchase Agreement with certain accredited investors (the "October 2014 Investors"), pursuant to which we, in a private placement, issued and sold to the October 2014 Investors (the "2014 Private Placement") an aggregate of 730,776 shares of our common stock at a price per share of $3.25 for an aggregate purchase price of approximately $2.4 million, and warrants to purchase up to an aggregate of 365,388 shares of our common stock with an initial exercise price of $4.00 per share that are exercisable for the period from April 22, 2015 through April 22, 2020. In connection with the 2014 Private Placement, we also issued a warrant to purchase up to an aggregate of 9,230 shares of our common stock to one advisor. The warrants issued in the 2014 Private Placement include both cash and "cashless exercise" features.

The 2014 Private Placement required the repricing and issuance of additional common stock warrants to the holders of warrants issued in the February 2012 common stock and warrant sale. The exercise price of the warrants decreased from $11.73 per share to $10.86 per share and the number of shares issuable upon exercise of the warrants increased from 1,212,665 to 1,309,785.

On December 31, 2014, we entered into the Note Purchase Agreement with the Investor pursuant to which we agreed to issue and sell the Initial Note to the Investor (the "Note Private Placement"). See Note 5 - "Debt-Convertible Promissory Notes" for additional information regarding the terms of the Initial Note. Pursuant to the terms of the Note Purchase Agreement, we are subject to certain registration obligations and we may be required to effect one or more other registrations to register for resale the shares of our common stock issued or issuable under the Initial Note in connection with certain "piggy-back" registration rights granted to the Investor.

The Note Private Placement required the repricing and issuance of additional common stock warrants to the holders of warrants issued in the February 2012 common stock and warrant sale. The exercise price of the 2012 warrants decreased from $10.86 per share to $10.25 per share and the number of shares issuable upon exercise of the warrants increased from 1,309,785 to 1,387,685.

On January 15, 2015, we entered into the Note Purchase Agreement with the Additional Investors and, on January 20, 2015, issued and sold to the Additional Investors, in a private placement, the Additional Notes in an aggregate principal amount of $925,000 (the "Additional Note Private Placement"). The Additional Notes have the same terms and conditions as the Initial Note.

Craig-Hallum acted as the sole placement agent for the sale and issuance of the Additional Notes. In connection with the sale and issuance of the Additional Notes, we issued to Craig-Hallum an unsecured convertible promissory note, upon the same terms and conditions as the Notes, in an aggregate principal amount equal to 5% of the proceeds received by us pursuant to the sale and issuance of the Additional Notes, or $46,250 (the “Placement Agent Note”). As of the date of filing of this Quarterly Report on form 10-Q, the Placement Agent Note remains outstanding.

The Additional Note Private Placement required the repricing and issuance of additional common stock warrants to the holders of warrants issued in the Private Placement. The exercise price of these warrants decreased from $10.25 per share to $9.59 per share and the number of shares issuable upon exercise of the warrants increased from 1,387,685 to 1,483,161.

On February 27, 2015, we entered into a purchase agreement with Craig-Hallum (the "Underwriter") relating to our sale and issuance of 3,573,899 shares of our common stock and corresponding warrants to purchase up to 714,780 shares of our common stock (the "February 2015 Offering"). Each share of common stock was sold in combination with a warrant to purchase 0.20 of a share of common stock. The purchase price to the public for each share of common stock and accompanying warrant was $1.95.

The purchase price paid by the Underwriter to us for the common stock and accompanying warrants was $1.8135. The net proceeds from the February 2015 Offering, after deducting the Underwriter's discount and other estimated February 2015 Offering expenses, were approximately $6.2 million.

The accompanying warrants are exercisable immediately upon their initial issuance date at an exercise price of $2.24 per share and will expire five years from the date of issuance. The exercise price will also be subject to adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting our common stock.

The February 2015 Offering required the repricing and issuance of additional common stock warrants to the holders of warrants issued in the Private Placement. The exercise price of these warrants decreased from $9.59 per share to $7.56 per share and the number of shares issuable upon exercise of the warrants increased from 1,483,161 to 1,881,396.

On June 30, 2015, we entered into a Securities Purchase Agreement with certain accredited investors (the "July 2015 Investors") pursuant to which, on July 7, 2015, we sold to the July 2015 Investors (a) an aggregate of approximately 1.5 million shares of our common stock at a price per share of $1.42, (b) warrants (the "Series B Warrants") to purchase up to an aggregate of 0.7 million shares of our common stock with an exercise price of $0.01 per share, and (c) warrants (the "Series A Warrants" and, together with the Series B Warrants, the "July 2015 Warrants") to purchase up to an aggregate of 1.2 million shares of our common stock, with an exercise price of $1.66 per share (collectively, the "July 2015 Offering"). Each of the July 2015 Warrants has a term of 5 and 1/2 years. The Series B Warrants were immediately exercisable upon issuance. The Series A Warrants became exercisable on January 7, 2016, six months from the date of issuance. The aggregate gross proceeds to us from the July 2015 Offering were approximately $3.0 million.

Craig-Hallum (the "2015 Placement Agent") served as the sole placement agent for the July 2015 Offering. In consideration for services rendered as the placement agent in the July 2015 Offering, we (a) paid to the 2015 Placement Agent cash commissions equal to approximately $212,783, or 7.0% of the gross proceeds received in the July 2015 Offering; (b) issued to the 2015 Placement Agent a five-year warrant to purchase up to 107,033 shares of our common stock with an exercise price of $1.66 per share and which is subject to other terms that are the same as the terms of the Series A Warrants; and (c) reimbursed the 2015 Placement Agent for reasonable out-of-pocket expenses, including fees paid to the 2015 Placement Agent's legal counsel, incurred in connection with the July 2015 Offering, which reimbursable expenses did not exceed $50,000.

The July 2015 Offering required the repricing and issuance of additional common stock warrants to the holders of warrants issued in the Private Placement. The exercise price of these warrants decreased from $7.56 per share to $6.50 per share and the number of shares issuable upon exercise of the warrants increased from 1,881,396 to 2,188,177.

On January 6, 2016, we entered into a Securities Purchase Agreement (the "SPA") with certain accredited investors (the "2016 Investors"), pursuant to which, on January 8, 2016, we sold to the 2016 Investors, and the 2016 Investors purchased from us (the "January 2016 Offering"), an aggregate of approximately $2.2 million of units (the "Units") consisting of (a) an aggregate of 2,365,243 shares (the "A-1 Preferred Shares") of our Series A-1 Convertible Preferred Stock (the "A-1 Preferred"), and (b) warrants (the "2016 Warrants") to purchase up to an aggregate of 1,773,929 shares of our common stock. Each Unit was sold to the 2016 Investors at a purchase price of $0.93 per Unit. The A-1 Preferred Shares are convertible into shares of our common stock at an initial rate of 1-for-1, which conversion rate is subject to further adjustment as set forth in our Certificate of Designation of Series A-1 Convertible Preferred Stock, which was filed with the Secretary of State of the State of Delaware on January 8, 2016 (the "Series A-1 Certificate of

Designation"). Pursuant to the terms of the Series A-1 Certificate of Designation, the holders of the A-1 Preferred Shares will generally be entitled to that number of votes as is equal to the product obtained by multiplying: (i) the number of whole shares of our common stock into which the A-1 Preferred may be converted as of the record date of such vote or consent, by (ii) 0.93, rounded down to the nearest whole number. Therefore, every 1.075269 shares of A-1 Preferred will generally initially be entitled to one vote. In May 2016, 2,150,538 of the A-1 Preferred Shares were converted into 2,150,538 shares of our common stock. At June 30, 2016, there were 214,705 A-1 Preferred Shares outstanding.

The 2016 Warrants were immediately exercisable upon issuance, have a term of five years and have an exercise price of $1.21 per share of our common stock. Each 2016 Warrant includes both cash and "cashless exercise" features and an exchange feature whereby the holder of the 2016 Warrant may exchange (the "Exchange Right") all or any portion of the 2016 Warrant for a number of shares of our common stock equal to the quotient obtained by dividing the "Exchange Amount" by the closing bid price of our common stock on the second trading day prior to the date the 2016 Warrant is exchanged (the "Exchange Price").

Under the 2016 Warrants, the "Exchange Amount" is based upon a Black Scholes option pricing model, and the aggregate Exchange Amount under all of the 2016 Warrants will be $1,436,882, subject to adjustment to the extent that the risk-free U.S. Treasury rate fluctuates between the date of issuance of the 2016 Warrants and the date the 2016 Warrants are exchanged. Each 2016 Warrant provides that the number of shares that may be issued upon exercise of the Exchange Right is limited to the number of shares that may be purchased pursuant to the terms of the 2016 Warrant, unless we have previously obtained stockholder approval or approval from The Nasdaq Stock Market LLC to issue any additional shares of our common stock (the "Additional Shares") pursuant to the Exchange Right (the "Required Approvals"). For any Exchange Right exercised more than 90 days following the issuance of the 2016 Warrants, if we have not obtained either of the Required Approvals, we will be required to pay the 2016 Warrant holder an amount in cash for any Additional Shares that we cannot issue without the Required Approvals based on the Exchange Amount.

The 2016 Warrants further provide that, to the extent the closing bid price of our common stock on the second trading day prior to the date the 2016 Warrant is exchanged is less than $0.50, the Exchange Price will be deemed to be equal to $0.50, and, in addition to issuing shares of our common stock based on this Exchange Price, we will be required to pay to the 2016 Warrant holder an amount in cash equal to the product obtained by multiplying (a) $0.50 minus the closing bid price of our common stock on the second trading day prior to the date the 2016 Warrant is exchanged, by (b) the aggregate number of shares of our common stock issued to the 2016 Warrant holder by the Company in such exchange at an Exchange Price equal to $0.50. Therefore, if the Required Approvals are obtained, based on the Exchange Amount of $1,436,882 (which, as noted above, is subject to adjustment to the extent that the risk-free U.S. Treasury rate fluctuates between the date of the issuance of the 2016 Warrants and the date the 2016 Warrants are exchanged), the maximum number of shares of our common stock issuable pursuant to the Exchange Right in the 2016 Warrants will be 2,873,765. In addition, if, for example, assuming an Exchange Amount of $1,436,882, the closing bid price of our common stock on the second trading day prior to the date the 2016 Warrants are exchanged is $0.25, we would be required to pay to the 2016 Warrant holders cash in an aggregate amount of $718,441 in addition to issuing the 2016 Warrant holders 2,873,765 shares.

In accordance with the terms of the SPA, we amended that certain Series A Warrant to purchase up to an aggregate of 1,161,972 shares of our common stock previously issued by us to an affiliate of one of the 2016 Investors on July 7, 2015 (the "Original Warrant"), as previously reported by us on our Amendment No. 1 to Current Report on Form 8-K/A, filed with the SEC on July 7, 2015 (as so amended, the "Amended Warrant"). The Amended Warrant amends the Original Warrant to provide that the Amended Warrant is subject to the same terms and conditions as the 2016 Warrants and, therefore, includes both cash and "cashless exercise" features and an Exchange Right whereby the number of shares issuable pursuant to the Exchange Right is equal to the "Amended Warrant Exchange Amount", which is based on a Black Scholes option pricing model, and will be $941,197, subject to adjustment to the extent that the risk-free U.S. treasury rate fluctuates between the date of issuance of the Amended Warrant and the date the Amended Warrant is exchanged. The Amended Warrant is exercisable for up to 1,161,972 shares of our common stock in the event we have obtained either of the Required Approvals with respect to the Amended Warrant. In the event the Amended Warrant holder exercises the Amended Warrant more than 90 days following the issuance of the Amended Warrant, if we have not obtained either of the Required Approvals, we will be required to pay the Amended Warrant holder an amount in cash for the shares of our common stock that we cannot issue under the Amended Warrant pursuant to such exercise without the Required Approvals based on the Amended Warrant Exchange Amount.

The Amended Warrant also provides that, to the extent the closing bid price of our common stock on the second trading day prior to the date the Amended Warrant is exchanged is less than $0.50, the Exchange Price will be deemed

to be equal to $0.50, and, in addition to issuing shares of our common stock based on this Exchange Price (assuming receipt of the Required Approvals), we will be required to pay to the Amended Warrant holder an amount in cash equal to the product obtained by multiplying (a) $0.50 minus the closing bid price of our common stock on the second trading day prior to the date the Amended Warrant is exchanged, by (b) the aggregate number of shares of our common stock issued to the Amended Warrant holder by us in such exchange at an Exchange Price equal to $0.50. Therefore, if the Required Approvals are obtained, based on the Amended Warrant Exchange Amount of $941,197 (which, as noted above, is subject to adjustment to the extent that the risk-free U.S. Treasury rate fluctuates between the issuance of the Amended Warrant and the date the Amended Warrant is exchanged), the maximum number of shares of our common stock issuable pursuant to the Exchange Right in the Amended Warrant will be 1,882,395. In addition, if, for example, assuming an Amended Warrant Exchange Amount of $941,197, the closing bid price of our common stock on the second trading day prior to the date the Amended Warrant is exchanged is $0.25, we would be required to pay to the Amended Warrant holder cash in an aggregate amount of $470,599 in addition to issuing the Amended Warrant holder 1,882,395 shares.

In connection with entering into the SPA, we also entered into a Registration Rights Agreement, dated January 8, 2016, with the 2016 Investors. Pursuant to the terms of the Registration Rights Agreement, we were required to file with the SEC a registration statement to register for resale the shares of our common stock issuable upon conversion of the A-1 Preferred Shares and the shares

of our common stock issuable upon exercise of the 2016 Warrants and the Amended Warrant by January 25, 2016. We filed the required registration statement with the SEC on January 25, 2016.

Craig-Hallum (the "Placement Agent") served as the sole placement agent for the January 2016 Offering. In consideration for services rendered as the Placement Agent in the January 2016 Offering, we (1) paid to the Placement Agent cash commissions equal to approximately $140,000, or 7.0% of the gross proceeds received in the January 2016 Offering, excluding any proceeds received from Third Security, LLC or any of its affiliates; (2) issued to the Placement Agent, for a price of $50, a five-year warrant to purchase up to 107,527 shares of our common stock at an exercise price of $1.21 per share (the "Agent Warrant"), which is subject to the same terms as the 2016 Warrants except that the Agent Warrant was not exercisable until July 8, 2016 and does not contain the Exchange Right; and (3) reimbursed the Placement Agent for reasonable out-of-pocket expenses, including fees paid to the Placement Agent's legal counsel, incurred in connection with the January 2016 Offering, which reimbursable expenses did not exceed $50,000.

The January 2016 Offering and the payment of all accrued and unpaid dividends on the Series A Preferred Stock and Series B Preferred Stock in the form of shares of our common stock at a rate of $1.00 per share of our common stock discussed under "-Conversion of Preferred Stock" below required the repricing and issuance of additional common stock warrants to the holders of warrants issued in the Private Placement. The exercise price of these warrants decreased to $4.39 per share and the number of shares issuable upon exercise of the warrants increased from 2,188,177 to 3,239,827.

On May 31, 2016, we issued to a vendor an aggregate of 78,000 shares of our common stock and, on June 14, 2016, we issued to a second vendor an aggregate of 64,153 shares of our common stock. Such shares of common stock were issued to the vendors in lieu of an aggregate cash amount of approximately $89,000 owed by us to such vendors for services previously performed by such vendors. We issued the shares to the vendors in transactions exempt from registration under the Securities Act of 1933, as amended (the "Securities Act"), in reliance on the exemptions provided by Section 4(a)(2) of the Securities Act and/or Regulation D promulgated thereunder and in reliance on similar exemptions under applicable state laws. The offering of the shares to the vendors did not involve a public offering, and no general solicitation or advertisement was made in connection with the offering of the shares to the vendors.

On June 7, 2016, we entered into an At the Market Offering Agreement (the "ATM Agreement") with Craig-Hallum, as sales agent, pursuant to which we may offer and sell, from time to time, through Craig-Hallum, up to $3,500,000 of shares (the "Shares") of our common stock. Any Shares offered and sold in the offering will be issued pursuant to our effective shelf registration statement on Form S-3 (File No. 333-201907) and the related prospectus previously declared effective by the SEC on February 13, 2015, as supplemented by a prospectus supplement, dated June 7, 2016, that we filed with the SEC pursuant to Rule 424(b)(5) under the Securities Act of 1933, as amended (the "Securities Act"). The number of shares eligible for sale under the ATM Agreement will be subject to the limitations of General Instruction I.B.6 of Form S-3.

Under the terms of the ATM Agreement, we will pay Craig-Hallum a placement fee of 3.25% of the gross sales price of the Shares, unless Craig-Hallum acts as principal, in which case we may sell Shares to Craig-Hallum as principal at a price to be agreed upon by us and Craig-Hallum. We will also reimburse Craig-Hallum for certain expenses incurred in connection with the ATM Agreement, and agreed to provide indemnification and contribution to Craig-Hallum with respect to certain liabilities, including liabilities under the Securities Act and the Securities Exchange Act of 1934, as amended.

During the three and nine months ended September 30, 2016, we sold 1,035,255 and 1,150,569 shares under the ATM Agreement. For the nine months ended September 30, 2016, the average sales price per common share was $0.42 and the aggregate net proceeds from the sales totaled $0.5 million.

During the three months ended September 30, 2016, the sale of shares under the ATM Agreement required the repricing and issuance of additional common stock warrants to the holders of warrants issued in the Private Placement. The exercise price of these warrants decreased to $4.23 per share and the number of shares issuable upon exercise of the warrants increased from 3,262,088 to 3,362,276.

Common Stock Warrants.

During the nine months ended September 30, 2016 and 2015, we issued warrants to purchase 3,055,555 and 3,466,841 shares of common stock, respectively. None of the issued warrants were exercised during such periods. The warrants issued in the nine months ended September 30, 2016 included 1,174,099 warrants issued due to repricing requirements of the Private Placement and 1,881,456 warrants issued in connection with the January 2016 Offering. The warrants issued in the nine months ended September

30, 2015 included 800,492 warrants issued due to repricing requirements of the Private Placement and 2,666,349 warrants issued in connection with the February 2015 Offering and the July 2015 Offering. Warrants to purchase an aggregate of 8,976,354 shares of common stock were outstanding at September 30, 2016.

Warrant Holder	Issue Year	Expiration	Underlying Shares	Exercise Price
Various Institutional Holders[1]	2012	February 2017	2,919,043	$4.23
Affiliates of Third Security, LLC[1]	2012	February 2017	443,233	$4.23
Various Institutional Holders[2]	2013	January 2018	441,655	$9.00
Affiliates of Third Security, LLC[2]	2013	January 2018	250,000	$9.00
Various Institutional Holders[3]	2014	April 2020	374,618	$4.00
Various Institutional Holders[4]	2015	February 2020	714,780	$2.24
Various Institutional Holders[5]	2015	December 2020	122,433	$1.66
Various Institutional Holders[5]	2015	December 2020	667,164	$0.01
Various Institutional Holders[6]	2015	January 2021	1,161,972	$1.21
Affiliates of Third Security, LLC[7]	2016	January 2021	161,026	$1.21
Various Institutional Holders[7]	2016	January 2021	1,720,430	$1.21
			8,976,354	

(1) These warrants were issued in connection with the Private Placement completed in February 2012 and are classified as a liability in our financial statements. See Note 9 - “Fair Value” for additional information. These warrants also contain certain anti-dilution provisions that provide for an adjustment to the exercise price and number of shares issuable upon exercise of the warrant in the event that we engage in certain issuances of shares of our common stock at a price lower than the exercise price of the warrant.

(2) These warrants were issued in connection with the 2013 Offering, which was completed in January 2013.

(3) These warrants were issued in connection with the 2014 Private Placement, which was completed in October 2014.

(4) These warrants were issued in connection with the February 2015 Offering, which was completed in February 2015.

(5) These warrants were issued in connection with the July 2015 Offering, which was completed in July 2015.

(6) These warrants were originally issued in connection with the July 2015 Offering, which was completed in July 2015, and were amended in connection with the January 2016 Offering, which was completed in January 2016.

(7) These warrants were issued in connection with the January 2016 Offering, which was completed in January 2016.

Issuance of Series B Preferred Stock.

On March 5, 2014, we entered into a Series B Convertible Preferred Stock Purchase Agreement (the “Series B Purchase Agreement”) with affiliates of Third Security, LLC (the “2014 Third Security Investors”), pursuant to which we, in a private placement, sold and issued an aggregate of 1,443,297 shares of our Series B Preferred Stock, par value $0.01 per share (the “Series B Preferred Stock”), at a price per share of $4.85 for an aggregate purchase price of approximately $7.0 million. Each share of Series B Preferred Stock issued pursuant to the Series B Purchase Agreement was initially convertible into shares of our common stock at a rate of 1-for-1, which conversion rate was subject to further adjustment as set forth in the Certificate of Designation of Series B Convertible Preferred Stock.

In connection with the Series B financing, we also entered into a Registration Rights Agreement, dated March 5, 2014, with the 2014 Third Security Investors, pursuant to which we granted certain demand, “piggy-back” and S-3 registrations rights covering the resale of the shares of common stock underlying the Series B Preferred Stock issued

pursuant to the Series B Purchase Agreement and all shares of common stock issuable upon any dividend or other distribution with respect thereto.

The Series B financing required the repricing and issuance of additional common stock warrants to the holders of warrants issued in the Private Placement. The exercise price of the warrants decreased from $12.96 per share to $11.73 per share and the number of shares issuable upon exercise of the warrants increased from 1,097,600 to 1,212,665.

Conversion of Preferred Stock.

On January 6, 2016, the Company entered into a Conversion Agreement (the "Conversion Agreement") with the holders (the "Preferred Holders") of all of the Company's outstanding shares of Series A Convertible Preferred Stock, par value $0.01 per share (the "Series A Preferred Stock"), and Series B Preferred Stock, pursuant to which, among other things, the Preferred Holders: (a) elected to convert all of the outstanding shares of Series A Preferred Stock and Series B Preferred Stock into shares of our common stock, in each case in accordance with the terms thereof, and (b) agreed that all accrued and unpaid dividends on the Series A Preferred Stock and Series B Preferred Stock would be paid by the Company in shares of our common stock at a rate of $1.00 per share of our common stock (collectively, the "Conversion").

The outstanding shares of Series A Preferred Stock were convertible into shares of our common stock at a rate of 1-for-3, and the outstanding shares of Series B Preferred Stock were convertible into shares of our common stock at a rate of 1-for-1. Prior to the entry into the Conversion Agreement, there were 2,586,205 shares of Series A Preferred Stock outstanding, which were converted into 862,057 shares of our common stock, and 1,443,297 shares of Series B Preferred Stock outstanding, which were converted into 1,443,297 shares of our common stock, for an aggregate of 2,305,354 shares of our common stock issued upon conversion of the Series A Preferred Stock and Series B Preferred Stock (the "Conversion Shares"). At the time of the entry into the Conversion Agreement, there were $3,681,591.90 in accrued and unpaid dividends on the outstanding shares of Series A Preferred Stock, which were converted, in accordance with the Conversion Agreement, into 3,681,590 shares of our common stock, and $793,236.17 in accrued and unpaid dividends on the outstanding shares of Series B Preferred Stock, which were converted, in accordance with the terms of the Conversion Agreement, into 793,235 shares of our common stock, for an aggregate of 4,474,825 shares of our common stock issued pursuant to the accrued and unpaid dividends on the Series A Preferred Stock and Series B Preferred Stock. Therefore, in connection with the full conversion of the Series A Preferred Stock and Series B Preferred Stock, plus the conversion of all accrued and unpaid dividends thereon, we issued an aggregate of 6,780,179 shares of our common stock to the Preferred Holders on January 6, 2016.

Following the conversion of the shares of Series A Preferred Stock and Series B Preferred Stock into common stock, no shares of Series A Preferred Stock or Series B Preferred Stock remain outstanding.

Preferred Stock Dividends.

We had cumulative undeclared dividends on our Series A Preferred Stock and Series B Preferred Stock of zero and $4.4 million at September 30, 2016 and December 31, 2015, respectively. Since dividends should generally not be recognized as a liability until declared, we had a recorded liability of zero for these undeclared dividends.

We had no undeclared dividends for the three months ended September 30, 2016. For the three months ended September 30, 2015 and the nine months ended September 30, 2016 and 2015, we had undeclared dividends. In accordance with the FASB's Accounting Standards Codification Topic 260-10-45-11, "Earnings per Share", these dividends were added to the net loss per share calculation.

9. FAIR VALUE

FASB guidance on fair value measurements, which defines fair value, establishes a framework for measuring fair value and expands disclosures about fair value measurements for our financial assets and liabilities, as well as for other assets and liabilities that are carried at fair value on a recurring basis in our consolidated financial statements. FASB guidance establishes a three-level fair value hierarchy based upon the assumptions (inputs) used to price assets or liabilities. The three levels of inputs used to measure fair value are as follows:

Level 1—Unadjusted quoted prices in active markets for identical assets or liabilities;

Level 2—Observable inputs other than those included in Level 1, such as quoted prices for similar assets and liabilities in active markets or quoted prices for identical assets or liabilities in inactive markets; and

Table of Contents
TRANSGENOMIC, INC. AND SUBSIDIARY
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
Three and Nine Months Ended September 30, 2016 and 2015

Level 3—Unobservable inputs reflecting our own assumptions and best estimate of what inputs market participants would use in pricing the asset or liability.

Debt.
Our long term debt book value approximates fair market value due to the variable interest rate it bears.

Common Stock Warrant Liabilities.

Certain of our issued and outstanding warrants to purchase shares of common stock do not qualify to be treated as equity and, accordingly, are recorded as a liability.

2012 Warrant Liability
The 2012 Warrant Liability represents the fair value of the 1.2 million warrants issued in February 2012, which, through a series of changes in exercise price since February 2012, are now exercisable for 3.4 million shares of common stock. We are required to record these instruments at fair value at each reporting date and changes are recorded as a non-cash adjustment to earnings. The gains or losses included in earnings are reported in other income (expense) in our Statement of Operations. Management does not believe that this liability will be settled by a use of cash.
The 2012 Warrant Liability is considered a Level 3 financial instrument and is valued using a Monte Carlo simulation model. This method is well suited to valuing options with non-standard features, such as anti-dilution protection. A Monte Carlo simulation model uses repeated random sampling to simulate significant uncertainty in inputs. Assumptions and inputs used in the valuation of the common stock warrants are broken down into four sections: Static Business Inputs; Static Technical Inputs; Simulated Business Inputs; and Simulated Technical Inputs.
Static Business Inputs include: our equity value, which was estimated using our stock price of $0.28 as of September 30, 2016; the amount of the down-round financing; the timing of the down-round financing; and the expected exercise period of 0.41 years from the valuation date.
Static Technical Inputs include: volatility of 67% and the risk-free interest rate of 0.42% based on the 1-year U.S. Treasury yield interpolated from the six-month and one-year U.S. Treasury bonds.
Simulated Business Inputs include: the probability of down-round financing, which was estimated to be 100% for simulated equity values below the down-round financing cut-off point.
Simulated Technical Inputs include: our equity value follows a geometric Brownian motion and is simulated over weekly periods; and a down-round financing event that was randomly simulated in an iteration based on the 100% discrete probability of a down-round financing for those iterations where our simulated equity value at the expected timing of a down-round financing event was below the down-round financing cut-off point.

During the three and nine months ended September 30, 2016 and 2015, the changes in the fair value of the liability measured using significant unobservable inputs (Level 3) were comprised of the following:

	Dollars in Thousands For the Three Months Ended September 30,	
	2016	2015
Beginning balance at July 1	$ —	$ 560
Total (gains) or losses:		

Recognized in earnings	—	(385)
Balance at September 30	$ —	$ 175

Table of Contents
TRANSGENOMIC, INC. AND SUBSIDIARY
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
Three and Nine Months Ended September 30, 2016 and 2015

	Dollars in Thousands For the Nine Months Ended	
	September 30, 2016	September 30, 2015
Beginning balance at January 1	$ 350	$ 145
Total (gains) or losses:		
Recognized in earnings	(350)	30
Balance at September 30	$ —	$ 175

2016 Warrant Liability

The 2016 Warrant Liability represents the fair value of the 1.8 million warrants issued in January 2016. We are required to record these instruments at fair value at each reporting date and changes are recorded as a non-cash adjustment to earnings. The gains or losses included in earnings are reported in other income (expense) in our Statement of Operations.

The Common Stock Warrant Liability is considered a Level 3 financial instrument and is valued using a binomial lattice simulation model. This method is well suited to valuing options with non-standard features. Assumptions and inputs used in the valuation of the common stock warrants include; our equity value, which was estimated using our stock price of $0.28 as of September 30, 2016; volatility of 86%; and a risk-free interest rate of 1.04%.

During the three and nine months ended September 30, 2016, the changes in the fair value of the liability measured using significant unobservable inputs (Level 3) were comprised of the following:

	Dollars in Thousands For the Three Months Ended September 30, 2016
Beginning balance at July 1	$ 1,442
Total (gains) or losses:	
Recognized in earnings	(12)
Balance at September 30	$ 1,430

	Dollars in Thousands For the Nine Months Ended September 30, 2016
Beginning balance at January 1	$ —
Additions	1,437
Total (gains) or losses:	
Recognized in earnings	(7)

Balance at September 30	$ 1,430

The change in unrealized gains or losses of Level 3 liabilities was included in earnings and was reported in other income (expense) in our Statement of Operations.

10. STOCK OPTIONS

Stock Options.

Table of Contents
TRANSGENOMIC, INC. AND SUBSIDIARY
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
Three and Nine Months Ended September 30, 2016 and 2015

The following table summarizes stock option activity during the nine months ended September 30, 2016:

	Number of Options	Weighted-Average Exercise Price
Outstanding at January 1, 2016	1,107,794	$ 3.45
Granted	25,250	0.84
Forfeited	(252,589)	3.28
Outstanding at September 30, 2016	880,455	$ 3.39
Exercisable at September 30, 2016	574,650	$ 4.08

During the nine months ended September 30, 2016, we granted options to purchase 25,250 shares of our common stock at a weighted-average exercise price of $0.84 per share under our 2006 Equity Incentive Plan, as amended (the "Plan"). Options to purchase an aggregate of 641,560 shares of our common stock were granted during the nine months ended September 30, 2015.

As of September 30, 2016, there were 574,650 options exercisable and 860,411 options that were vested or expected to vest with an aggregate intrinsic value of zero.

Stock Appreciation Rights ("SARs")

The following table summarizes SARs activity under the Plan during the nine months ended September 30, 2016:

	Number of SARs	Weighted-Average Exercise Price
Outstanding at January 1, 2016	98,333	$ 4.14
Outstanding at September 30, 2016	98,333	$ 4.14
Exercisable at September 30, 2016	92,558	$ 4.20

All outstanding SARs were issued solely to our executive officers.

As of September 30, 2016, 92,558 shares subject to outstanding SARs were exercisable and 98,333 shares were vested or expected to vest. The weighted-average exercise price of these SARs was $4.14 per share and the aggregate intrinsic value was zero.

11. SUBSEQUENT EVENTS

Merger Agreement

On October 12, 2016, Transgenomic, New Haven Labs Inc., a wholly owned subsidiary of Transgenomic ("Merger Sub" and, together with Transgenomic, the "Transgenomic Parties"), and Precipio Diagnostics, LLC ("Precipio") entered into an Agreement and Plan of Merger (the "Merger Agreement") pursuant to which Precipio will become a wholly owned subsidiary of Transgenomic (the "Merger"), on the terms and subject to the conditions set forth in the Merger Agreement. Following the Merger, Transgenomic will change its name to Precipio, Inc. ("New Precipio"). The parties expect the Merger to close in 2016.

When the Merger is completed, (i) each outstanding common unit of Precipio will be converted into the right to receive an amount of shares of New Precipio common stock based on an exchange ratio set forth in the Merger Agreement, which is dependent on the relative amount of outstanding liabilities of each of the parties at the time of the Merger, together with cash in lieu of fractional units, which will result in Precipio unit holders owning between 62% and 80% of the outstanding shares of New Precipio common stock (not taking into account the issuance of New Precipio preferred stock in the Merger or the private placement discussed below) and (ii) each outstanding preferred unit of Precipio will be converted into the right to receive shares of New Precipio preferred stock in an aggregate amount equal to $3 million.

In connection with the Merger, at the effective time of the Merger, New Precipio also will issue shares of New Precipio preferred stock in a private placement, whereby:

- holders of indebtedness of Transgenomic will receive $3 million in New Precipio preferred stock in exchange for such indebtedness; and

- New Precipio will issue for cash up to $7 million in New Precipio preferred stock to investors in a private placement.

New Precipio preferred stock will be issued based on a pre-money valuation of New Precipio of $25 million and will represent, in the aggregate, approximately 34% of the outstanding shares of New Precipio common stock on an as-converted basis, including New Precipio preferred stock issued in the Merger and the private placement.

The board of managers of Precipio and the boards of directors of Transgenomic and Merger Sub, and Transgenomic, in its capacity as the sole stockholder of Merger Sub, have each approved the Merger Agreement and the board of managers of Precipio and the board of directors of Transgenomic have each recommended that their respective equity holders approve the transactions contemplated by the Merger Agreement. Transgenomic will hold a special meeting of its stockholders to approve the issuance of shares of Transgenomic common stock pursuant to the Merger, as required by Nasdaq Listing Rules, as well as certain other matters (the “Special Meeting”).

The Merger Agreement contains various representations, warranties and covenants of the Transgenomic Parties and Precipio, including, among others, covenants (i) by each of Precipio and Transgenomic to operate its business in the ordinary course, (ii) by each of Precipio and Transgenomic not to engage in certain kinds of transactions during the period between the execution of the Merger Agreement and the completion of the Merger, (iii) by Precipio to have its members approve the Merger and (iv) by Transgenomic to hold the Special Meeting.

Under the Merger Agreement, Precipio and Transgenomic are subject to customary “no shop” provisions that limit their respective abilities to solicit alternative acquisition proposals from third parties or to provide confidential information to third parties, subject to a “fiduciary out” provision that allows Precipio and Transgenomic to provide information and participate in discussions with respect to certain unsolicited written proposals and to terminate the Merger Agreement and enter into an acquisition agreement with respect to a superior proposal in compliance with the terms of the Merger Agreement (a “Superior Proposal”).

Completion of the Merger is subject to various conditions, including, among others: (i) approval of the holders of a majority of Transgenomic’s shares of outstanding common stock, (ii) approval of the requisite amount of the members of Precipio, (iii) approval of an amendment to the Certificate of Incorporation of Transgenomic contemplating the New Preferred Stock Financing (described below) and changing the name of Transgenomic to Precipio, Inc. or such other name as determined by Precipio, (iv) obtaining certain third party consents, (v) the absence of any judgment, injunction, order or decree prohibiting or enjoining the completion of the Merger, (vi) consummation of the New Preferred Stock Financing, (vii) approval of listing of the Parent Common Stock on NASDAQ, (viii) completion of the Common Unit Recapitalization (described above), (ix) increase in the size of the Transgenomic board by two members and the appointment of designees in accordance with the Merger Agreement and (x) the lock-up of certain Transgenomic stockholders and Precipio members.

In addition, the obligation of the parties to complete the Merger is subject to certain other conditions, including (i) subject to the standards set forth in the Merger Agreement, the accuracy of the representations and warranties of the other party, (ii) compliance of each party with its covenants in all material respects and (iii) no material adverse effect of either party.

The Merger Agreement contains certain termination rights for both the Transgenomic Parties and Precipio. Either may terminate the Merger Agreement if the Merger is not completed on or before the date that is six months following the date of the Merger Agreement. Moreover, either party may terminate the Merger Agreement if the other party changes its recommendation to its security holders to approve the Merger and the related transactions or enter into an agreement with a third party regarding a Superior Proposal (as defined in the Merger Agreement).

The Merger Agreement also provides that, upon termination of the Merger Agreement under certain circumstances, Transgenomic will be required to pay to Precipio a termination payment of $256,500. If the Merger Agreement is terminated for certain other reasons, Precipio will be required to pay Transgenomic a termination payment of $256,500.

The foregoing description of the Merger Agreement does not purport to be complete and is qualified in its entirety by reference to the Merger Agreement, which is attached hereto as Exhibit 2.1 and incorporated by reference herein. The Merger Agreement has been included as an exhibit hereto solely to provide investors and security holders with information regarding its terms. It is not intended to be a source of financial, business or operational information about Transgenomic, Precipio or their respective subsidiaries or affiliates. The representations, warranties and covenants contained in the Merger Agreement are made only for purposes of the Merger Agreement and are made as of specific dates; are solely for the benefit of the parties; may be subject to

qualifications and limitations agreed upon by the parties in connection with negotiating the terms of the Merger Agreement, including being qualified by confidential disclosures made for the purpose of allocating contractual risk between the parties rather than establishing matters as facts; and may be subject to standards of materiality applicable to the contracting parties that differ from those applicable to investors or security holders. Investors and security holders should not rely on the representations, warranties and covenants or any description thereof as characterizations of the actual state of facts or condition of Transgenomic, Precipio or their respective subsidiaries or affiliates. Moreover, information concerning the subject matter of the representations, warranties and covenants may change after the date of the Merger Agreement, which subsequent information may or may not be fully reflected in public disclosures.

In connection with the Merger, the Supporting Stockholders and Supporting Members (as defined in the Merger Agreement) are obligated to enter into a lock-up agreement with the combined company at the Effective Time pursuant to which the Supporting Stockholders will agree, among other things, not to sell shares of Transgenomic common stock for the six month period beginning at the Effective Time.

The Merger Agreement also provides that the combined company will enter into employment agreements with certain employees of Precipio at the Effective Time and that the officers of the combined company will be agreed to by the parties prior to the Effective Time.

Special Meeting of Stockholders

At our 2016 Special Meeting of Stockholders (the “Special Meeting”) held on October 31, 2016, our stockholders approved the proposal to authorize our Board of Directors to, in its discretion, amend our Third Amended and Restated Certificate of Incorporation to effect a reverse stock split of our common stock at a ratio of between one-for-ten to one-for-thirty, such ratio to be determined by our Board of Directors (the “Reverse Split Proposal”). The Reverse Split Proposal was described in detail in our definitive proxy statement filed with the Securities and Exchange Commission on September 22, 2016, as supplemented on October 13, 2016.

The approval of the Reverse Split Proposal by our stockholders provides our Board of Directors with the authority to carry out the reverse stock split, but our Board of Directors is not obligated to do so. If our Board of Directors determines to effect the reverse stock split, it intends to select a reverse stock split ratio that it believes would be most likely to achieve the anticipated benefits of the reverse stock split. Notwithstanding approval of the Reverse Split Proposal by our stockholders, our Board of Directors may, in its sole discretion, abandon the Reverse Split Proposal and determine, prior to the effectiveness of any filing with the Secretary of State of the State of Delaware, not to effect the reverse stock split. If our Board of Directors fails to implement the reverse stock split on or prior to the first anniversary date of the Special Meeting, stockholder approval again would be required prior to implementing any reverse stock split.

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

Forward-Looking Information

This Quarterly Report on Form 10-Q, including this Management’s Discussion and Analysis, contains forward-looking statements. These statements are based on management’s current views, assumptions or beliefs of future events and financial performance and are subject to uncertainty and changes in circumstances. Readers of this report should understand that these statements are not guarantees of performance or results. Many factors could affect our actual financial results and cause them to vary materially from the expectations contained in the forward-looking statements. These factors include, among other things: our expected revenue, income (loss), receivables, operating expenses,

supplier pricing, availability and prices of raw materials, insurance reimbursements, product pricing, sources of funding operations and acquisitions, our ability to raise funds, sufficiency of available liquidity, future interest costs, future economic circumstances, business strategy, industry conditions, our ability to execute our operating plans, the success of our cost savings initiatives, competitive environment and related market conditions, expected financial and other benefits from our organizational restructuring activities, actions of governments and regulatory factors affecting our business, retaining key employees and other risks as described in our reports filed with the Securities and Exchange Commission. In some cases these statements are identifiable through the use of words such as “anticipate,” “believe,” “estimate,” “expect,” “intend,” “plan,” “project,” “target,” “can,” “could,” “may,” “should,” “will,” “would” or the n these terms and other similar expressions.

You are cautioned not to place undue reliance on these forward-looking statements. The forward-looking statements we make are not guarantees of future performance and are subject to various assumptions, risks and other factors that could cause actual results to differ materially from those suggested by these forward-looking statements. Actual results may differ materially from those suggested by the forward-looking statements that we make for a number of reasons, including those described in Part

Table of Contents

II, Item 1A, “Risk Factors,” of this Quarterly Report on Form 10-Q and in Part I, Item 1A, “Risk Factors,” of our Annual Report on Form 10-K for the fiscal year ended December 31, 2015, which we filed with the Securities and Exchange Commission on April 14, 2016.

We expressly disclaim any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

The following discussion should be read together with our financial statements and related notes contained in this Quarterly Report on Form 10-Q and with the financial statements, related notes and Management’s Discussion and Analysis included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2015, which we filed with the Securities and Exchange Commission on April 14, 2016. Results for the three and nine months ended September 30, 2016 are not necessarily indicative of results that may be attained in the future.

Overview

Transgenomic, Inc. (“we”, “us”, “our”, the “Company” or “Transgenomic”) is a biotechnology company advancing personalize medicine for the detection and treatment of cancer and inherited diseases through our proprietary molecular technologies and clinical and research services. A key goal is to bring our Multiplexed ICE COLD-PCR (“MX-ICP”) product to the clinical market through strategic partnerships and licensing agreements, enabling the use of blood and other bodily fluids for more effective and patient-friendly diagnosis, monitoring and treatment of cancer.

MX-ICP is technology proprietary to Transgenomic. It is a reagent that improves the ability to detect genetic mutations by 100 - 400 fold over existing technologies. This technology has been validated internally on all currently available sequencing platforms, including Sanger, Next Gen Sequencing and Digital PCR. By enhancing the level of detection of genetic mutations and suppressing the normal, or wild-type, DNA, several benefits are provided. It is generally understood that most current technologies are unable to consistently identify mutations that occur in less than approximately 5% of a sample. However, many mutations found at much lower levels, even as low as 0.01%, are known to be clinically relevant and can have significant consequences to a patient: both in terms of how they will respond to a given drug or treatment and how a given tumor is likely to change over time. More importantly, in our view, is the ability to significantly improve the level of detection while using blood, saliva and even urine as a source for DNA, rather than depending on painful, expensive and potentially dangerous tumor biopsies. We believe that this is an important advancement in patient care with respect to cancer detection, treatment and monitoring and can result in significant cost savings for the healthcare system by replacing invasive procedures with the simple collection of blood or other bodily fluids. By broadening the types of samples that can be used for testing and allowing all sequencing platforms to provide improved identification of low level mutations, MX-ICP has the potential to make testing more readily available and more patient friendly, enable genetic monitoring of disease progression, effectively guide treatment protocols, and reduce the overall cost of diagnosis and monitoring while significantly improving patient outcomes.

Historically, our operations were organized and reviewed by management along our major product lines and presented in two business segments: Laboratory Services and Genetic Assays and Platforms. Beginning with the quarter ended September 30, 2015, our operations are now organized as one business segment, our Laboratory Services segment, and during the fourth quarter of 2015, we began including a portion of our Laboratory Services segment as discontinued operations.

Our laboratory in Omaha, Nebraska is focused on providing genetic analytical services related to oncology and pharmacogenomics research services supporting Phase II and Phase III clinical trials conducted by pharmaceutical and biotechnology companies. Our laboratory employs a variety of genomic testing service technologies, including our proprietary MX-ICP technology. ICE COLD-PCR is a proprietary ultra-high sensitivity platform technology with breakthrough potential to enable wide adoption of personalized, precision medicine in cancer and other diseases. It can be run in any laboratory that contains standard PCR systems. MX-ICP enables detection of multiple known and

unknown mutations from virtually any sample type, including tissue biopsies, blood, urine, saliva, cell-free DNA ("cfDNA") and circulating tumor cells ("CTCs") at levels greater than 1,000-fold higher than standard DNA sequencing techniques. It is easy to implement and use within existing workflows. Our laboratory in Omaha is certified under the Clinical Laboratory Improvement Amendments ("CLIA") as a high complexity laboratory and is accredited by the College of American Pathologists.

Our condensed consolidated balance sheets, statements of operations and statements of cash flows for all periods presented reflect our former Genetic Assays and Platforms activities and Patient Testing business as discontinued operations (See Note 3 - "Discontinued Operations" in the Notes to Unaudited Condensed Consolidated Financial Statements contained in this Quarterly Report on Form 10-Q).

Table of Contents

Third Quarter 2016 Overview and Recent Highlights

Below is a summary of our most recent business activities:

- Signed Data Sharing Agreement with Ventana Medical Systems, Inc. - In September 2016, we signed a data sharing agreement with Ventana Medical Systems, Inc., a subsidiary of Roche Holdings ("Ventana"). The agreement allows Ventana to access DNA test results from an existing research agreement between us and the University of Melbourne in Australia. As part of this research agreement, the University of Melbourne is conducting additional clinical validation studies of our MX-ICP technology.
- Added New Distributors in China and India for our ICEme Kits that Enable Liquid Biopsy Cancer Testing on Existing Platforms - In September 2016, we signed agreements with two additional distributors in China and India for our ICEme™ Mutation Enrichment Kits for cancer genomic testing. The kits incorporate our MX-ICP technology and are designed to enable virtually any laboratory to conduct high quality DNA mutation detection in cancer patients using plasma, blood or tissue samples and existing sequencing platforms. The new distributors, Joying Bio in China and Biotron Healthcare in India, are important suppliers of advanced life science products in their respective markets.

Uncertainties

We have historically operated at a loss and have not consistently generated sufficient cash from operating activities to cover our operating and other cash expenses. We have been able to historically finance our operating losses through borrowings or from the issuance of additional equity. At September 30, 2016, we had cash and cash equivalents of $0.1 million. Our ability to continue as a going concern is dependent upon a combination of generating additional revenue, improving cash collections, potentially selling underutilized assets and, if necessary, raising additional financing to meet our obligations and pay our liabilities arising from normal business operations when they come due. The outcome of these matters cannot be predicted with any certainty at this time and raises substantial doubt that we will be able to continue as a going concern.

Results of Continuing Operations

Three Months Ended September 30, 2016 and 2015

Net Sales. Net sales were as follows:

	Dollars in Thousands			
	Three Months Ended September 30,		Change	
	2016	2015	$	%
Total Net Sales	$457	$330	$127	38%

Net sales increased by $0.1 million, or 38%, during the three months ended September 30, 2016 as compared to the same period in 2015. Sales of our contract laboratory services were flat year over year. The slight increase in total net sales for the current year period reflects higher grant revenues.

Cost of Goods Sold. Cost of goods sold includes material costs for the products that we sell and other direct costs (primarily personnel costs, rent, supplies and depreciation) associated with the operations of our laboratories.

Gross Profit. Gross profit and gross margins were as follows:

	Dollars in Thousands			
	Three Months Ended September 30,		Margin %	
	2016	2015	2016	2015
Gross Profit	$27	$(115)	6%	(35)%

Gross profit was $27,000, or 6% of total net sales, during the third quarter of 2016, compared to negative $115,000, or (35)% of total net sales, during the same quarter of 2015. The increased gross profit during the three months ended September 30, 2016 as compared to the same period of 2015 is due to increased revenues.

Selling, General and Administrative Expenses. Selling, general and administrative expenses primarily consist of personnel costs, marketing, travel costs, professional fees, facility costs and bad debt provisions. Our selling, general and administrative

costs decreased by $0.4 million to $1.3 million during the three month period ended September 30, 2016 as compared to the same period in 2015. This decrease was due to lower professional and lower stock compensation costs in the third quarter of 2016 as compared to the third quarter of 2015.

Research and Development Expenses. Research and development expenses primarily include personnel costs, intellectual property fees, patent costs, outside services, laboratory supplies and facility costs and are expensed in the period in which they are incurred. For the three months ended September 30, 2016, research and development expenses totaled $0.4 million as compared to $0.5 million for the three months ended September 30, 2015. Research and development expenses totaled 86% and 138% of net sales during the three months ended September 30, 2016 and 2015, respectively.

Other Income (Expense). Other expense for the three months ended September 30, 2016 and 2015 includes interest expense of $0.3 million and $0.2 million, respectively. In addition, we recorded less than $0.1 million of other income for the three months ended September 30, 2016 and other income of $0.4 million for the three months ended September 30, 2015 for the revaluation of common stock warrants, which was due to the change in fair value of the common stock warrant liability. The income and expense associated with the change in fair value of the warrants is a non-cash item.

Nine Months Ended September 30, 2016 and 2015

Net Sales. Net sales were as follows:

	Dollars in Thousands			
	Nine Months Ended September 30,		Change	
	2016	2015	$	%
Total Net Sales	$1,198	$1,522	$(324)	(21)%

Net sales decreased by $0.3 million, or 21%, during the nine months ended September 30, 2016 as compared to the same period in 2015. The decrease reflects fewer sales of our contract laboratory services as a result of fewer customers with active projects in the current year partially offset by increased grant revenues in the current year.

Cost of Goods Sold. Cost of goods sold includes material costs for the products that we sell and other direct costs (primarily personnel costs, rent, supplies and depreciation) associated with the operations of our laboratories.

Gross Profit. Gross profit and gross margins were as follows:

	Dollars in Thousands			
	Nine Months Ended September 30,		Margin %	
	2016	2015	2016	2015
Gross Profit	$(279)	$147	(23)%	10%

Gross profit was a negative $0.3 million, or (23)% of total net sales, during the first nine months of 2016, compared to $0.1 million, or 10% of total net sales, during the same period of 2015. The decrease in gross profit in the current year is a result of lower revenues during the nine months ended September 30, 2016 as compared to the first nine months of 2015. The negative gross margin in the current year is due to lower revenues that were insufficient to cover our laboratory’s fixed direct costs.

Selling, General and Administrative Expenses. Selling, general and administrative expenses primarily consist of personnel costs, marketing, travel costs, professional fees, facility costs and bad debt provisions. Our selling, general and administrative costs decreased by $1.0 million to $4.4 million during the nine month period ended September 30, 2016 as compared to the same period in 2015. This decrease was due to lower professional fees and lower stock compensation costs in the first nine months of 2016 as compared to the same period of 2015.

Research and Development Expenses. Research and development expenses primarily include personnel costs, intellectual property fees, outside services, collaboration expenses, laboratory supplies and facility costs and are expensed in the period in which they are incurred. For the nine months ended September 30, 2016, research and development expenses totaled $1.1 million as compared to $1.4 million for the nine months ended September 30,

2015. Research and development expenses totaled 89% and 90% of net sales during the nine months ended September 30, 2016 and 2015, respectively.

Other Income (Expense). Other expense for the nine months ended September 30, 2016 and 2015 includes interest expense of $0.8 million and $0.6 million, respectively. In addition, we recorded $0.4 million of other income for the nine months ended September 30, 2016 and other expense of less than $0.1 million for the nine months ended September 30, 2015 for the revaluation

of common stock warrants, which was due to the change in fair value of the common stock warrant liability. The income and expense associated with the change in fair value of the warrants is a non-cash item.

Discontinued Operations For The Three and Nine Months Ended September 30, 2016 and 2015

During the third quarter of 2015, we decided to divest our Genetic Assays and Platforms business, resulting in a strategic shift that had a major effect on our operations and financial results. Therefore, the divested Genetic Assays and Platforms operations meet the criteria to be reported as discontinued operations.

During the fourth quarter of 2015, our Board of Directors took actions to begin the process of divesting our Patient Testing business located in New Haven, Connecticut. In March 2016, we announced that we had suspended testing services in our Patient Testing laboratory as we review and evaluate various strategic alternatives for that business. As a result of these actions, our Patient Testing business meets the criteria to be reported as discontinued operations.

The related assets, liabilities, results of operations and cash flows for both the Genetic Assays and Platforms business and Patient Testing business are classified as assets held for sale, liabilities held for sale and discontinued operations for all periods presented.

Net loss from discontinued operations for the three and nine months ended September 30, 2016, includes approximately $0.1 million and $1.1 million, respectively, in proceeds received from the sale of assets of our discontinued Patient Testing business.

Revenues and net loss of the discontinued operations consisted of the following:

	Three months ended September 30,		Nine months ended September 30,	
(Dollars in thousands)	2016	2015	2016	2015
Net sales	$283	$5,507	$1,960	$17,868
Net loss from discontinued operations, before tax	$(34)	$(5,204)	$(25)	$(6,259)
Income tax expense	—	44	—	133
Loss from discontinued operations, net of tax	$(34)	$(5,248)	$(25)	$(6,392)

Liquidity and Capital Resources

Our working capital positions at September 30, 2016 and December 31, 2015 were as follows:

	Dollars in Thousands		
	September 30, 2016	December 31, 2015	Change
Current assets (including cash and cash equivalents of $71 and $444, respectively)	$866	$ 3,282	$(2,416)
Current liabilities	18,260	16,981	1,279
Working capital	$(17,394)	$ (13,699)	$(3,695)

Conversion Agreement

On January 6, 2016, we entered into a Conversion Agreement (the “Conversion Agreement”) with the holders (the “Preferred Holders”) of all of our outstanding shares of Series A Convertible Preferred Stock (the “Series A Preferred”), and Series B Convertible Preferred Stock (the “Series B Preferred”), pursuant to which, among other things, the Preferred Holders: (1) elected to convert all of the outstanding shares of Series A Preferred and Series B Preferred into shares of our common stock in each case in accordance with the terms thereof, and (2) agreed that all accrued and unpaid dividends on the Series A Preferred and Series B Preferred would be paid by us in shares of common stock at a

rate of $1.00 per share of common stock (collectively, the “Conversion”).

Table of Contents

The outstanding shares of Series A Preferred were convertible into shares of common stock at a rate of 1-for-3, and the outstanding shares of Series B Preferred were convertible into shares of common stock at a rate of 1-for-1. Prior to the entry into the Conversion Agreement, there were 2,586,205 shares of Series A Preferred outstanding, which were converted into 862,057 shares of common stock, and 1,443,297 shares of Series B Preferred outstanding, which were converted into 1,443,297 shares of common stock, for an aggregate of 2,305,354 shares of common stock issued upon conversion of the Series A Preferred and Series B Preferred. At the time of the entry into the Conversion Agreement, there were $3,681,591 in accrued and unpaid dividends on the outstanding shares of Series A Preferred, which were converted, in accordance with the Conversion Agreement, into 3,681,590 shares of common stock, and $793,236 in accrued and unpaid dividends on the outstanding shares of Series B Preferred, which were converted, in accordance with the terms of the Conversion Agreement, into 793,235 shares of common stock, for an aggregate of 4,474,825 shares of our common stock issued pursuant to the accrued and unpaid dividends on the Series A Preferred and Series B Preferred. Therefore, in connection with the full conversion of the Series A Preferred and Series B Preferred, plus the conversion of all accrued and unpaid dividends thereon, we issued an aggregate of 6,780,179 shares of common Stock to the Preferred Holders on January 6, 2016.

January 2016 Private Placement

On January 6, 2016, we entered into a Securities Purchase Agreement (the “A-1 Preferred Purchase Agreement”) with certain accredited investors (the “A-1 Preferred Investors”), pursuant to which, on January 8, 2016, we sold to the A-1 Preferred Investors, and the A-1 Preferred Investors purchased from us (the “A-1 Preferred Offering”), an aggregate of approximately $2.2 million of units (the “Units”) consisting of (1) an aggregate of 2,365,243 shares (the “A-1 Preferred Shares”) of our Series A-1 Convertible Preferred Stock (the “A-1 Preferred”), and (2) warrants (the “Warrants”) to purchase up to an aggregate of 1,773,929 shares of our common stock. Each Unit was sold to the A-1 Preferred Investors at a purchase price of $0.93 per Unit. The A-1 Preferred Shares are convertible into shares of common stock at an initial rate of 1-for-1, which conversion rate is subject to further adjustment as set forth in our Certificate of Designation of Series A-1 Convertible Preferred Stock, which was filed with the Secretary of State of the State of Delaware on January 8, 2016 (the “Series A-1 Certificate of Designation”). Pursuant to the terms of the Series A-1 Certificate of Designation, the holders of the A-1 Preferred Shares will generally be entitled to that number of votes as is equal to the product obtained by multiplying: (a) the number of whole shares of common stock into which the A-1 Preferred may be converted as of the record date of such vote or consent, by (b) 0.93, rounded down to the nearest whole number. Therefore, every 1.075269 shares of A-1 Preferred will generally initially be entitled to one vote.

The Warrants were immediately exercisable upon issuance, have a term of five years and have an exercise price of $1.21 per share of common stock. Each Warrant also includes both cash and cashless exercise features and an exchange feature whereby the holder of the Warrant may exchange all or any portion of the Warrant for a number of shares of our common stock equal to the quotient obtained by dividing the “Exchange Amount” by the closing bid price of our common stock on the second trading day prior to the date the Warrant is exchanged (the “Exchange Right”). Under the Warrants, the “Exchange Amount” is based upon a Black Scholes option pricing model, and the aggregate Exchange Amount under all of the Warrants will be $1,436,882, subject to adjustment to the extent that the risk-free U.S. Treasury rate fluctuates between the date of issuance of the Warrants and the date the Warrants are exchanged. Each Warrant provides that the number of shares that may be issued upon exercise of the Exchange Right is limited to the number of shares that may be purchased pursuant to the terms of the Warrant, unless we have previously obtained stockholder approval or approval from The Nasdaq Stock Market LLC to issue any additional shares of our common stock (the “Additional Shares”) pursuant to the Exchange Right (the “Required Approvals”). For any Exchange Right exercised more than 90 days following the issuance of the Warrants, if we have not obtained either of the Required Approvals, we will be required to pay the Warrant holder an amount in cash for any Additional Shares that we cannot issue without the Required Approvals based on the Exchange Amount.

At the Market Offering

On June 7, 2016, we entered into an At the Market Offering Agreement (the "ATM Agreement") with Craig-Hallum Capital Group LLC, as sales agent ("Craig-Hallum"), pursuant to which we may offer and sell, from time to time, through Craig-Hallum, up to $3,500,000 of shares (the "Shares") of our common stock. Any Shares offered and sold in the offering will be issued pursuant to our effective shelf registration statement on Form S-3 (File No. 333-201907) and the related prospectus previously declared effective by the Securities and Exchange Commission (the "SEC") on February 13, 2015, as supplemented by a prospectus supplement, dated June 7, 2016, that we filed with the SEC pursuant to Rule 424(b)(5) under the Securities Act. The number of shares eligible for sale under the ATM Agreement will be subject to the limitations of General Instruction I.B.6 of Form S-3. During the nine months ended September 30, 2016, we sold 1,150,569 shares under the ATM Agreement. The average sales price per common share was $0.42 and the aggregate net proceeds from the sales totaled $0.5 million.

Table of Contents

Please see Note 5 - “Debt” and Note 6 - “Commitments and Contingencies” in the Notes to Unaudited Condensed Consolidated Financial Statements contained in this Quarterly Report on Form 10-Q for additional information regarding our outstanding debt and debt servicing obligations.

At September 30, 2016, we had cash on hand of $0.1 million. Our current operating plan projects improved operating results and monetization of underutilized assets. As with any operating plan, there are risks associated with our ability to execute it. Therefore, there can be no assurance that we will be able to satisfy our obligations, or achieve the operating improvements as contemplated by the current operating plan. If we are unable to execute this plan, we will need to find additional sources of cash not contemplated by the current operating plan and/or raise additional capital to sustain continuing operations as currently contemplated. We could raise additional funds through various potential sources such as through the sale of assets or sale of debt or equity securities. However, there can be no assurance that the additional funding sources will be available to us at reasonable terms or at all. If we are unable to achieve our operating plan or obtain additional financing, our business would be jeopardized and we may not be able to continue as a going concern.

Analysis of Cash Flows - Nine Months Ended September 30, 2016 and 2015

Net Change in Cash and Cash Equivalents. Cash and cash equivalents decreased by $0.4 million during the nine months ended September 30, 2016, compared to an increase of $1.2 million during the nine months ended September 30, 2015. These amounts include cash provided by discontinued operations of $1.4 million and cash used in discontinued operations of $1.1 million, for the nine months ended September 30, 2016 and 2015, respectively.

Cash Flows From Continuing Operations

Cash Flows Used in Operating Activities. The cash flows used in operating activities of $4.0 million during the nine months ended September 30, 2016 included a net loss of $6.2 million and a decrease in accrued expenses of $0.7 million. These were partially offset by an increase in accounts payable of $2.5 million and a decrease in other current assets of $0.3 million. The cash flows used in operating activities in the first nine months of 2015 included the net loss of $7.2 million, a decrease in accounts payable of $0.2 million and an increase in other current assets of $0.2 million. These were partially offset by a decrease in accounts receivable of $0.2 million and other non-cash adjustments of $0.9 million.

Cash Flows Used in Investing Activities. Cash flows used in investing activities for continuing operations were $0.1 million and $0.3 million for the nine months ended September 30, 2016 and 2015, respectively.

Cash Flows Provided by Financing Activities. Cash flows provided by financing activities totaled $2.2 million for the nine months ended September 30, 2016, which included net proceeds of approximately $1.8 million from our Unit issuance, $0.5 million from sales under the ATM Agreement and $0.5 million from borrowing on our debt. These proceeds were partially offset by payments on our debt of approximately $0.6 million. Cash flows provided by financing activities during the nine months ended September 30, 2015 included net proceeds of $9.0 million from our common stock offerings and $0.9 million from the issuance of unsecured convertible promissory notes. These were partially offset by payments on our debt and capital lease obligations of $0.9 million.

Off-Balance Sheet Arrangements

At each of September 30, 2016 and December 31, 2015, we did not have any off-balance sheet arrangements that have or are reasonably likely to have a current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources.

Contractual Obligations and Commitments

There have been no material changes to our contractual obligations outside the normal course of business as compared to those disclosed in our Annual Report on Form 10-K for the year ended December 31, 2015, filed with the Securities and Exchange Commission on April 14, 2016.

Critical Accounting Policies and Estimates

Accounting policies used in the preparation of our consolidated financial statements may involve the use of management judgments and estimates. Certain of our accounting policies are considered critical as they are both important to the portrayal of our financial statements and require significant or complex judgments on the part of management. Our judgments and estimates are based on experience and assumptions that we believe are reasonable under the circumstances. Further, we evaluate our judgments and estimates from time to time as circumstances change. Actual financial results based on judgments or estimates may vary under

Table of Contents

different assumptions or circumstances. Our critical accounting policies are discussed in our Annual Report on Form 10-K for the fiscal year ended December 31, 2015, filed with the Securities and Exchange Commission on April 14, 2016.

Recently Issued Accounting Pronouncements

Please refer to our Annual Report on Form 10-K for the fiscal year ended December 31, 2015, filed with the Securities and Exchange Commission on April 14, 2016. There have been no changes to those accounting pronouncements listed except as noted in Note 2 - “Summary of Significant Accounting Policies-Recent Accounting Pronouncements” in the Notes to Unaudited Condensed Consolidated Financial Statements contained in this Quarterly Report on Form 10-Q.

Impact of Inflation

We do not believe that price inflation or deflation had a material adverse effect on our financial condition or results of operations during the periods presented.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

We are a smaller reporting company, as defined by Rule 12b-2 of the Securities Exchange Act of 1934, as amended, and are not required to provide the information required under this item.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Management performed, with the participation of our Chief Executive Officer and Interim Chief Financial Officer, an evaluation of the effectiveness of our disclosure controls and procedures as defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). Our disclosure controls and procedures are designed to ensure that information required to be disclosed in the reports we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission’s rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Interim Chief Financial Officer, to allow timely decisions regarding required disclosures. Based on the evaluation, our Chief Executive Officer and Interim Chief Financial Officer concluded that, as of September 30, 2016, our disclosure controls and procedures were effective at the reasonable assurance level.

Changes in Internal Control over Financial Reporting

We have evaluated the changes in our internal control over financial reporting that occurred during the three months ended September 30, 2016 and concluded that there have not been any changes that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Table of Contents

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

We are subject to a number of claims of various amounts that arise out of the normal course of our business. In our opinion, the disposition of pending claims, in excess of recorded accruals, could have a material adverse effect on our financial position, results of operations or cash flows. On February 25, 2016, the Board of Regents of the University of Nebraska ("UNMC") filed a lawsuit against us in the District Court of Douglas County, Nebraska, for breach of contract and seeking recovery of $0.7 million owed by us to UNMC. We and UNMC are currently in discussions to determine a mutually agreeable means by which to settle the outstanding liability. A $0.7 million liability has been recorded at December 31, 2015 and September 30, 2016.

In addition, on April 13, 2016, Fox Chase Cancer Center ("Fox Chase") filed a lawsuit against us in the Court of Common Pleas of Philadelphia County, First Judicial District of Pennsylvania Civil Trial Division (the "Court of Common Pleas"), alleging, among other things, breach of contract, tortious interference with present and prospective contractual relations, unjust enrichment, fraudulent conversion and conspiracy and seeking punitive damages in addition to damages and other relief. This lawsuit relates to a license agreement we entered into with Fox Chase in August 2000, as amended (the "License Agreement"), as well as the assignment of certain of our rights under the License Agreement to Integrated DNA Technologies, Inc. ("IDT") pursuant to the Surveyor Kit Patent, Technology and Inventory Purchase Agreement we entered into with IDT effective as of July 1, 2014 (the "IDT Agreement"). Pursuant to the terms of the IDT Agreement, we agreed to indemnify IDT with respect to certain of the claims asserted in the Fox Chase proceeding. On July 8, 2016, the Court of Common Pleas sustained our preliminary objections to several of Fox Chase's claims and dismissed the claims for tortious interference, fraudulent conversion, conspiracy, punitive damages and attorney's fees. Accordingly, the case has been narrowed so that only certain contract claims and an unjust enrichment claim remain pending against us. We believe that we have good and substantial defenses to the claims asserted by Fox Chase. We are unable to determine whether any loss will occur or to estimate the range of such potential loss; therefore, no amount of loss has been accrued by us as of the date of filing of this Quarterly Report on Form 10-Q. Furthermore, there is no guarantee that we will prevail in this suit or receive any damages or other relief if we do prevail.

On June 23, 2016, the Icahn School of Medicine at Mount Sinai ("Mount Sinai") filed a lawsuit against us in the Supreme Court of the State of New York, County of New York, alleging, among other things, breach of contract and, alternatively, unjust enrichment and quantum merit, and seeking recovery of $0.7 million owed by us to Mount Sinai for services rendered. We and Mount Sinai are currently in discussions to determine a mutually agreeable means by which to settle the outstanding liability. A $0.7 million liability has been recorded at December 31, 2015 and September 30, 2016.

The outcome of legal proceedings and claims brought against us are subject to significant uncertainty. Therefore, although management considers the likelihood of such an outcome to be remote, if one or more of these legal matters were resolved against us in the same reporting period for amounts in excess of management's expectations, our financial statements for such reporting period could be materially adversely affected. In general, the resolution of a legal matter could prevent us from offering our services or products to others, could be material to our financial condition or cash flows, or both, or could otherwise adversely affect our operating results.

Item 1A. Risk Factors

Investing in our common stock involves a high degree of risk. You should consider carefully the risks and uncertainties described below, together with all of the other information in this Quarterly Report on Form 10-Q, before making a decision to invest in our common stock. The risks and uncertainties described below may not be the only ones we face. If any of the risks actually occur, our business, financial condition and results of operations could be materially and adversely affected. In that event, the trading price of our common stock could decline, and you could lose part or all of your investment.

Risk factors marked with an asterisk (*) below include a change from or an update to the risk factors included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2015 filed with the Securities and Exchange

Commission on April 14, 2016.

*We have a history of operating losses and may incur losses in the future.

We have experienced annual losses from continuing operations since inception of our operations. Our operating loss for the years ended December 31, 2015 and 2014 was $9.2 million and $10.6 million, respectively, and for the nine months ended September 30, 2016 and 2015 was $5.7 million and $6.6 million, respectively. These historical losses have been due principally to the expenses that we have incurred in order to develop and market our products, the fixed nature of our manufacturing costs and merger and acquisition costs.

Table of Contents

*Recurring operating losses raise substantial doubt about our ability to continue as a going concern.

We have incurred substantial operating losses and have used cash in our operating activities for the past several years. As of September 30, 2016, we had negative working capital of $17.4 million.

The audit report issued by our independent registered public accounting firm for our financial statements for the fiscal year ended December 31, 2015 states that our independent registered public accounting firm has substantial doubt in our ability to continue as a going concern due to the risk that we may not have sufficient cash and liquid assets at December 31, 2015 to cover our operating and capital requirements for the next 12 months. If that is the case, and if sufficient cash cannot be obtained, we would have to substantially alter, or possibly even discontinue, operations. Additionally, as of September 30, 2016, we do not believe that we will have sufficient cash to meet our operating requirements for at least the next 12 months. Our financial statements and related notes thereto included elsewhere in this Quarterly Report on Form 10-Q do not include any adjustments that might result from the outcome of this uncertainty.

Our current operating plan is designed to improve operating results, improve collection rates and monetize underutilized assets. There are no guarantees that these efforts will be successful and, if not, we may use more cash than projected and not be able to meet our current obligations. As with any operating plan, there are risks associated with our ability to execute it. Therefore, there can be no assurance that we will be able to satisfy our obligations, or achieve the operating improvements as contemplated by the current operating plan. If we are unable to execute this plan, we will need to find additional sources of cash not contemplated by the current operating plan and/or raise additional capital to sustain continuing operations as currently contemplated. We could seek to raise additional funds through various potential sources such as through the sale of assets or sale of debt or equity securities. However, there can be no assurance that the additional funding sources will be available to us at reasonable terms or at all. If we are unable to achieve our operating plan or obtain additional financing, our business would be jeopardized and we may not be able to continue as a going concern.

*We have substantial debt and other financial obligations and we may incur even more debt, and we are in default under our loan agreement with affiliates of Third Security, LLC, which means that the lenders under the loan agreement have the right to cease making additional advances, accelerate repayment of all sums due and take action to collect the amounts owed to them, including foreclosing on their security interest, each of which could adversely affect us.

Our revolving line of credit and term loan with affiliates of Third Security, LLC, a related party (the “Lenders”), are governed by a Loan and Security Agreement, as amended (the “Loan and Security Agreement”), which contains certain affirmative and negative covenants. As of September 30, 2016, we had borrowings of $7.2 million under the Loan and Security Agreement. Under the term loan, we agreed not to (i) pledge or otherwise encumber our assets other than to the Lenders, (ii) enter into additional borrowings or guarantees, (iii) repurchase our capital stock, or (iv) enter into certain mergers or acquisitions without the Lenders’ consent. To secure the repayment of amounts borrowed under the revolving line of credit and term loan, we granted the Lenders a security interest in all of our assets. As of September 30, 2016, we were not in compliance with the Loan and Security Agreement, as amended by the Ninth Amendment, due to the fact that we did not make the required monthly interest payments during the third quarter and have not received a waiver for the non-compliance. We are therefore currently in default under the Loan and Security Agreement. Accordingly, under the terms of the Loan and Security Agreement, the Lenders currently have the right to cease making additional advances, accelerate repayment of all sums due and take action to collect the amounts owed to them, including foreclosing on their security interest or forcing us into bankruptcy, which would have a material adverse effect on our financial condition and results of operations.

We may be required to amend our Loan and Security Agreement, refinance all or part of our existing debt, sell assets, incur additional indebtedness or raise equity. Further, based upon our actual performance levels, our covenants relating to income, debt coverage and cash flow and minimum working capital requirements could limit our ability to incur additional debt, which could hinder our ability to execute on our current business strategy. Our ability to make scheduled payments on our debt and other financial obligations and comply with financial covenants depends on our financial and operating performance. Our financial and operating performance will continue to be subject to prevailing economic conditions and to financial, business and other factors, some of which are beyond our control.

*Our existing indebtedness could adversely affect our ability to fulfill our obligations and may place us at a competitive disadvantage in our industry.

We continue to have substantial debt outstanding and we may incur additional indebtedness from time to time to finance working capital, product development efforts, strategic acquisitions, investments and alliances, capital expenditures or other general corporate purposes, subject to the restrictions contained in our existing indebtedness and in any other agreements under which we incur indebtedness. Our outstanding indebtedness and debt service requirements could adversely affect our ability to operate our

Table of Contents

business and may limit our ability to take advantage of potential business opportunities. For example, our existing level of indebtedness presents the following risks:

- we will be required to use a substantial portion of our cash flow from operations to pay principal and interest on our indebtedness, thereby reducing the availability of our cash flow to fund working capital, capital expenditures, product development efforts, acquisitions, investments and strategic alliances and other general corporate requirements;
- our debt service obligations could limit our flexibility in planning for, or reacting to, changes in our business and our industry and could limit our ability to pursue other business opportunities, borrow more money for operations or capital in the future and implement our business strategies;
- our level of indebtedness and the covenants within our debt instruments may restrict us from raising additional financing on satisfactory terms to fund working capital, capital expenditures, product development efforts, strategic acquisitions, investments and alliances, and other general corporate requirements; and
- our outstanding indebtedness may make it difficult for us to attract additional financing when needed.

As of September 30, 2016, we were not in compliance with the Loan and Security Agreement, as amended by the Ninth Amendment, due to the fact that we did not make the required monthly interest payments during the third quarter and we are therefore currently in default under the Loan and Security Agreement. Accordingly, we may be required to attempt to renegotiate the terms of the instruments relating to the indebtedness, seek to refinance all or a portion of the indebtedness or obtain additional financing. There can be no assurance that we will be able to successfully renegotiate such terms, that any such refinancing would be possible or that any additional financing could be obtained on terms that are favorable or acceptable to us.

Our future capital needs are uncertain and we may need to raise additional funds in the future.

Our future capital needs are uncertain and we may need to raise additional funds in the future through debt or equity offerings. Our future capital requirements will depend on many factors, including, but not limited to:

- Revenue generated by sales of our products;
- Expenses incurred in manufacturing and selling our products;
- Costs of developing new products or technologies;
- Costs associated with capital expenditures;
- The number and timing of strategic transactions; and
- Working capital requirements related to growing existing business.

We may need additional capital to finance our growth or to compete, which may cause dilution to existing stockholders or limit our flexibility in conducting our business activities.

We may need to raise additional capital in the future to fund expansion, respond to competitive pressures or acquire complementary businesses, technologies or services. Such additional financing may not be available on terms acceptable to us or at all. To the extent that we raise additional capital by issuing equity securities, our stockholders may experience substantial dilution, and to the extent we engage in additional debt financing, if available, we may become subject to additional restrictive covenants that could limit our flexibility in conducting future business activities. If additional financing is not available or not available on acceptable terms, we may not be able to continue as a going concern, fund our expansion, promote our brands, take advantage of acquisition opportunities, develop or enhance services or respond to competitive pressures.

Governmental payers and health care plans have taken steps to control costs.

Medicare, Medicaid and private insurers have increased their efforts to control the costs of health care services, including clinical testing services. They may reduce fee schedules or limit/exclude coverage for certain types of tests that we perform. Medicaid reimbursement varies by state and is subject to administrative and billing requirements and budget pressures. We expect efforts to reduce reimbursements, impose more stringent cost controls and reduce utilization of testing services will continue. These efforts, including changes in laws or regulations, may have a material adverse impact on our business.

Weakness in U.S. or global economic conditions could have an adverse effect on our businesses.

The economies of the United States and other regions of the world in which we do business have experienced significant weakness, which, in the case of the U.S., has recently resulted in significant unemployment and slower growth in economic activity. A decline in economic conditions may adversely affect demand for our services and products, thus reducing our revenue. These conditions could also impair the ability of those with whom we do business to satisfy their obligations to us. The strengthening of the U.S. dollar has the potential to adversely impact U.S. businesses that operate overseas.

Table of Contents

Sales have been variable.

Our laboratory performs project-based work that changes from quarter to quarter. Therefore, comparison of the results of successive quarters may not accurately reflect trends or results for the full year due to the fact that ICP is a new product and will enable the liquid biopsy market to evolve rapidly and ensure Precision Medicine is adopted globally. We see the ICP business and revenues growing as our commercial strategy is successful and our partnerships and licensing agreements become profitable.

Changes in payer mix could have a material adverse impact on our net sales and profitability.

Testing services are billed to physicians, patients, government payers such as Medicare, and insurance companies. Tests may be billed to different payers depending on a particular patient's medical insurance coverage. Government payers have increased their efforts to control the cost, utilization and delivery of health care services as well as reimbursement for laboratory testing services. Further reductions of reimbursement for Medicare and Medicaid services or changes in policy regarding coverage of tests or other requirements for payment, such as prior authorization or a physician or qualified practitioner's signature on test requisitions, may be implemented from time to time. Reimbursement for the laboratory services component of our business is also subject to statutory and regulatory reduction. Reductions in the reimbursement rates and changes in payment policies of other third party payers may occur as well. Such changes in the past have resulted in reduced payments as well as added costs and have decreased test utilization for the clinical laboratory industry by adding more complex new regulatory and administrative requirements. As a result, increases in the percentage of services billed to government payers could have an adverse impact on our net sales.

We may experience temporary disruptions and delays in processing biological samples at our facilities.

We may experience delays in processing biological samples caused by software and other errors. Any delay in processing samples could have an adverse effect on our business, financial condition and results of operations.

Our laboratories require ongoing CLIA certification.

The CLIA extended federal oversight to virtually all clinical laboratories by requiring that they be certified by the federal government or by a federally-approved accreditation agency. The CLIA requires that all clinical laboratories meet quality assurance, quality control and personnel standards. Laboratories must also undergo proficiency testing and are subject to inspections.

The sanctions for failure to comply with the CLIA requirements include suspension, revocation or limitation of a laboratory's CLIA certificate, which is necessary to conduct business, cancellation or suspension of the laboratory's approval to receive Medicare and/or Medicaid reimbursement, as well as significant fines and/or criminal penalties. The loss or suspension of a CLIA certification, imposition of a fine or other penalties, or future changes in the CLIA law or regulations (or interpretation of the law or regulations) could have a material adverse effect on us.

We believe that we are in compliance with all applicable laboratory requirements, but no assurances can be given that our laboratories will pass all future certification inspections.

Failure to comply with HIPAA could be costly.

The Health Insurance Portability and Accountability Act ("HIPAA") and associated regulations protect the privacy and security of certain patient health information and establish standards for electronic health care transactions in the United States. These privacy regulations establish federal standards regarding the uses and disclosures of protected health information. Our Molecular Labs are subject to HIPAA and its associated regulations. If we fail to comply with these laws and regulations we could suffer civil and criminal penalties, fines, exclusion from participation in governmental health care programs and the loss of various licenses, certificates and authorizations necessary to operate our Patient Testing business. We could also incur liabilities from third party claims.

Our business could be adversely impacted by health care reform.

Government attention to the health care industry in the United States is significant and may increase. The Patient Protection and Affordable Care Act passed by Congress and signed into law by President Obama in March 2010 could adversely impact our business. While certain portions of the legislation have already gone into effect, the ultimate impact of the legislation on the health care industry is still unknown, and the overall impact on our business is likely to be extensive and could result in significant changes to our business and our customers' businesses.

41

Table of Contents

*We are subject to a number of claims of various amounts that arise out of the normal course of our business.

We are subject to a number of claims of various amounts that arise out of the normal course of our business. Specifically, on February 25, 2016, the Board of Regents of the University of Nebraska ("UNMC") filed a lawsuit against us in the District Court of Douglas County, Nebraska for breach of contract and seeking recovery of $0.7 million owed by us to UNMC. We and UNMC are currently in discussions to determine a mutually agreeable means by which to settle the outstanding liability. A $0.7 million liability has been recorded and is reflected in accrued expenses at December 31, 2015 and September 30, 2016.

In addition, on April 13, 2016, Fox Chase Cancer Center ("Fox Chase") filed a lawsuit against us in the Court of Common Pleas of Philadelphia County, First Judicial District of Pennsylvania Civil Trial Division (the "Court of Common Pleas"), alleging, among other things, breach of contract, tortious interference with present and prospective contractual relations, unjust enrichment, fraudulent conversion and conspiracy and seeking punitive damages in addition to damages and other relief. This lawsuit relates to a license agreement we entered into with Fox Chase in August 2000, as amended (the "License Agreement"), as well as the assignment of certain rights of our rights under the License Agreement to Integrated DNA Technologies, Inc. ("IDT"), pursuant to the Surveyor Kit Patent, Technology and Inventory Purchase Agreement we entered into with IDT effective as of July 1, 2014 (the "IDT Agreement"). Pursuant to the terms of the IDT Agreement, we agreed to indemnify IDT with respect to certain of the claims asserted in the Fox Chase proceeding. On July 8, 2016, the Court of Common Pleas sustained our preliminary objections to several of Fox Chase's claims and dismissed the claims for tortious interference, fraudulent conversion, conspiracy, punitive damages and attorney's fees. Accordingly, the case has been narrowed so that only certain contract claims and an unjust enrichment claim remain pending against us. We believe that we have good and substantial defenses to the claims asserted by Fox Chase. However, there is no guarantee that we will prevail in this suit or receive any damages or other relief if we do prevail.

On June 23, 2016, the Icahn School of Medicine at Mount Sinai ("Mount Sinai") filed a lawsuit against us in the Supreme Court of the State of New York, County of New York, alleging, among other things, breach of contract and, alternatively, unjust enrichment and quantum merit, and seeking recovery of $0.7 million owed by us to Mount Sinai for services rendered. We and Mount Sinai are currently in discussions to determine a mutually agreeable means by which to settle the outstanding liability. A $0.7 million liability has been recorded at December 31, 2015 and September 30, 2016.

Our ongoing and future litigation could result in significant additional costs and further divert the attention of our management and key personnel from our business operations and the implementation of our business strategy. In addition, the disposition of any of the pending claims against us, in excess of recorded accruals, could have a material adverse effect on our financial position, results of operations or cash flows.

We may be subject to client lawsuits.

Providers of clinical testing services may be subject to lawsuits alleging negligence or other legal claims. Potential suits could involve claims for substantial damages. Litigation could also have an adverse impact on our client base and our reputation. We maintain liability insurance coverage for certain claims that could result from providing or failing to provide clinical testing services, including inaccurate testing results and other exposures. Our insurance coverage limits our maximum recovery on individual claims and, therefore, there is no assurance that such coverage will be adequate.

*The sale of our products and business operations in international markets subjects us to additional risks.

During the past several years, international sales have represented a significant portion of our total net sales. As a result, a major portion of our net sales are subject to risks associated with international sales and operations. These risks include:

- Payment cycles in foreign markets are typically longer than in the U.S., and capital spending budgets for research agencies can vary over time with foreign governments;
- Changes in foreign currency exchange rates can make our products more costly in local currencies because our foreign sales are typically paid for in British Pounds or in Euros;
- The potential for changes in U.S. and foreign laws or regulations that result in additional import or export restrictions, higher tariffs or other taxes, more burdensome licensing requirements or similar impediments may limit our ability to

sell products and services profitably in these markets; and

- The fluctuation of foreign currency exchange rates to the U.S. Dollar and the Euro to the British Pound can cause our net sales and expenses to increase or decrease, which adds risk to our financial statements.

In addition, many of the countries in which we have sales, including the U.S. and several of the members of the European Union, have experienced and continue to experience uncertain economic conditions resulting from global as well as local factors. For example, on June 23, 2016, the United Kingdom (the “UK”) held a referendum pursuant to which voters elected to leave the

Table of Contents

European Union, commonly referred to as Brexit. As a result of UK voters' election to leave the European Union, the British government is expected to begin negotiating the terms of the UK's future relationship with the European Union. Although the long-term effects of Brexit will depend on any agreements the UK makes to retain access to the European Union markets, Brexit has created additional uncertainties that may ultimately result in new regulatory costs and challenges for companies and increased restrictions on imports and exports throughout Europe, which could adversely affect our ability to conduct and expand our operations in Europe and which may have an adverse effect on our business, financial condition and results of operations. In addition, Brexit may also increase the possibility that other countries may decide to leave the European Union in the future.

Our dependence on our suppliers exposes us to certain risks.

We rely on various suppliers for products and materials to produce our products. In the event that they would be unable to deliver these items due to product shortages or business closures, we may be unable to deliver our products to our customers in a timely manner or may need to increase our prices. The current economy poses the additional risk of our suppliers' inability to continue their businesses as usual.

Our markets are very competitive.

Many of our competitors have greater resources than we do and may enjoy other competitive advantages. This may allow them to more effectively market their products to our customers or potential customers, to develop products that make our products obsolete or to produce and sell products less expensively than us. As a result of these competitive factors, demand for and pricing of our products and services could be negatively affected.

Our patents may not protect us from others using our technology, which could harm our business and competitive position.

Patent law relating to the scope of claims in the technology fields in which we operate is still evolving. The degree of future protection for our proprietary rights is uncertain. Furthermore, we cannot be certain that others will not independently develop similar or alternative products or technology, duplicate any of our products, or, if patents are issued to us, design around the patented products developed by us. Our patents or licenses could be challenged by litigation and, if the outcome of such litigation were adverse to us, our competitors could be free to use our technology. We may not be able to obtain additional patents for our technology, or if we are able to do so, patents may not provide us with adequate protection or be commercially beneficial. In addition, we could incur substantial costs in litigation if we are required to defend ourselves in patent suits brought by third parties or if we initiate such suits.

We cannot be certain that other measures taken to protect our intellectual property will be effective.

We rely upon trade secrets, copyright and trademark laws, non-disclosure agreements and other contractual confidentiality provisions to protect some of our confidential and proprietary information that we are not seeking patent protection for various reasons. Such measures, however, may not provide adequate protection for our trade secrets or other proprietary information. If such measures do not protect our rights, third parties could use our technology and our ability to compete in the market would be reduced.

We are dependent upon licensed technologies and may need to obtain additional licenses in the future to offer our products and remain competitive.

We have licensed key components of our technologies from third parties. If these agreements were to terminate prematurely due to our breach of the terms of these licenses or we otherwise fail to maintain our rights to such technologies, we may lose the right to manufacture or sell a substantial portion of our products. In addition, we may need to obtain licenses to additional technologies in the future in order to keep our products competitive. If we fail to license or otherwise acquire necessary technologies, we may not be able to develop new products that we need to remain competitive.

The protection of intellectual property in foreign countries is uncertain.

A significant percentage of our sales are to customers located outside the U.S. Patent and other intellectual property laws of some foreign countries may not protect our intellectual property rights to the same extent as U.S. laws. We may need to bring proceedings to defend our patent rights or to determine the validity of our competitors' foreign patents. These proceedings could result in substantial cost and diversion of our other efforts. Finally, some of the patent protections available to us in the U.S. are not available to us in foreign countries due to the laws of those

countries.

Table of Contents

Our products could infringe on the intellectual property rights of others.

There are a significant number of U.S. and foreign patents and patent applications submitted for technologies in, or related to, our area of business. As a result, our use of our technology could infringe patents or proprietary rights of others. This may lead others to assert patent infringement or other intellectual property claims against us. We could incur substantial costs in litigation if we are required to defend against intellectual property claims by third parties. Additionally, any licenses that we might need as a result of any actual infringement might not be available to us on commercially reasonable terms, if at all.

Our failure to comply with any applicable government laws and regulations or otherwise respond to claims relating to improper handling, storage or disposal of hazardous chemicals that we use may adversely affect our results of operations.

Our research and development and manufacturing activities involve the controlled use of hazardous materials and chemicals. We are subject to federal, state, local and international laws and regulations governing the use, storage, handling and disposal of hazardous materials and waste products. If we fail to comply with applicable laws or regulations, we could be required to pay penalties or be held liable for any damages that result and this liability could exceed our financial resources. We cannot be certain that accidental contamination or injury will not occur. Any such accident could damage our research and manufacturing facilities and operations, resulting in delays and increased costs.

*We may issue a substantial amount of our common stock to holders of options and warrants and this could reduce the market price for our stock.

At September 30, 2016, we had obligations to issue 10,701,453 shares of common stock upon exercise of outstanding stock options, warrants or conversion rights. The issuance of these securities may be dilutive to our current stockholders and could negatively impact the market price of our common stock.

*Our common stock is thinly traded and a large percentage of our shares are held by a small group of unrelated, institutional owners.

At September 30, 2016, we had 24,139,130 shares of common stock outstanding. The sale of a significant number of shares into the public market has the potential to cause significant downward pressure on the price of our common stock. This is particularly the case if the shares being placed into the market exceed the market's ability to absorb the stock. This presents an opportunity for short sellers to contribute to the further decline of our stock price. If there are significant short sales of our stock, the price decline that would result from this activity will cause the share price to decline more so, which, in turn, may cause long holders of the stock to sell their shares, thereby contributing to sales of our stock in the market. In addition, the large concentration of our shares are held by a small group of stockholders which could result in increased volatility in our stock price due to the limited number of shares available in the market.

We have previously identified material weaknesses and ineffective internal controls could impact our business and financial results.

Our internal control over financial reporting may not prevent or detect misstatements because of its inherent limitations, including the possibility of human error, the circumvention or overriding of controls, or fraud. In the course of auditing our financial statements as of and for the year ended December 31, 2014, our independent registered public accounting firm identified material weaknesses in our internal control over financial reporting relating to proper timing and recognition of revenue and the elements used in our analysis and evaluation of the allowance for doubtful accounts to ensure that the allowance for doubtful accounts is reasonably stated. We remediated these material weaknesses in the year ended December 31, 2015.

Even effective internal controls can provide only reasonable assurance with respect to the preparation and fair presentation of financial statements. If we fail to maintain the adequacy of our internal controls, including any failure to implement required new or improved controls, or if we experience difficulties in their implementation, our business and financial results could be harmed, we could fail to meet our financial reporting obligations and we may not be able to accurately report financial results or prevent fraud.

*As we are currently not in compliance with the continued listing requirements of The Nasdaq Stock Market LLC ("Nasdaq"), Nasdaq may delist our shares of common stock, which would have an adverse impact on the trading

volume, liquidity and market price of our common shares.

On February 23, 2016, we received written notice (the "First Notice") from Nasdaq indicating that, based on the closing bid price of our common stock for the preceding 30 consecutive business days, we were not in compliance with the $1.00 minimum bid price requirement for continued listing on the Nasdaq Capital Market (the "Minimum Bid Price Requirement"), as set forth

Table of Contents

in Nasdaq Listing Rule 5550(a)(2). In accordance with Nasdaq Listing Rule 5810(c)(3)(A), we had a period of 180 calendar days, or until August 22, 2016, to regain compliance with the Minimum Bid Price Requirement. To have regained compliance, the closing bid price of our common stock must have met or exceeded $1.00 per share for at least ten consecutive business days during this 180 calendar day period.

On April 20, 2016, we received a second written notice (the "Second Notice") from Nasdaq indicating that, based on the stockholders' equity reported in our Annual Report on Form 10-K, as filed with the Securities and Exchange Commission on April 14, 2016, we were not in compliance with the minimum stockholders' equity requirement for continued listing on the Nasdaq Capital Market, which requires listed companies to maintain stockholders' equity of at least $2,500,000 (the "Minimum Stockholders' Equity Requirement"). In accordance with Nasdaq Listing Rule 5810(c)(2)(C), we had a period of 45 calendar days, or until June 6, 2016, to submit a plan to regain compliance with the Minimum Stockholders' Equity Requirement. Nasdaq indicated that, if our plan was accepted, Nasdaq may have granted an extension of up to 180 calendar days, or until October 17, 2016, to evidence compliance. We initially submitted our plan to regain compliance with the Minimum Stockholders' Equity Requirement to Nasdaq on May 31, 2016 and provided Nasdaq with supplemental information on June 22, 2016 and June 29, 2016. On June 30, 2016, based on the information we submitted to Nasdaq, Nasdaq granted us the maximum allowable 180 day extension to October 17, 2016 to evidence compliance with the Minimum Stockholders' Equity Requirement.

On August 24, 2016, we received a determination letter (the "Determination Letter") from the staff of Nasdaq stating that we had not regained compliance with the Minimum Bid Price Requirement. The Determination Letter also stated that we were not eligible for an additional 180-day extension to regain compliance with the Minimum Bid Price Requirement because we did not meet the Minimum Stockholders' Equity Requirement for continued listing on the Nasdaq Capital Market, which requires listed companies to maintain stockholders' equity of at least $2,500,000 (the "Minimum Stockholders' Equity Requirement"), as set forth in Nasdaq Listing Rule 5550(b)(1) and as discussed below. In addition, the Determination Letter provided that our common stock would be delisted from the Nasdaq Capital Market at the opening of business on September 2, 2016 unless we requested a hearing before the Nasdaq Hearings Panel (the "Panel").

On August 29, 2016, we requested a hearing before the Panel to appeal the Determination Letter in accordance with Nasdaq rules and as stated in the Determination Letter, and the hearing (the "Hearing") was held on October 13, 2016. At the Hearing, we asked that the Panel continue our listing through December 31, 2016, to allow us to close the Merger, which we expect to result in a combined entity that will meet all initial listing standards for the Nasdaq Capital Market; however, we noted that we will need to effectuate a reverse stock split to ensure compliance with the Minimum Bid Price Requirement.

On November 1, 2016, we received a decision letter (the "Decision Letter") from the staff of Nasdaq stating that the Panel had granted our request for continued listing on Nasdaq until December 31, 2016, subject to the following conditions.

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1. On or before November 15, 2016 we must report to the Panel, in writing, regarding the status of the reverse stock split, the filing of a definitive proxy for the Merger, and any feedback received from the staff of Nasdaq regarding the prospects of the application of the post-merger entity for listing on the Nasdaq Capital Market.

2. On or before December 31, 2016, we must have closed the Merger and gained approval from the staff of Nasdaq for listing of the post-merger company on the Nasdaq Capital Market.

In addition, in order to fully comply with the terms of the Decision Letter, we must be able to demonstrate compliance with all requirements for continued listing on Nasdaq, and, in the event that we are unable to do so, our securities may be delisted from Nasdaq in the future.

If we are unable to fully comply with the terms of the Decision Letter and are unable to demonstrate compliance with all requirements for continued listing on Nasdaq, our securities may be delisted from Nasdaq in the future. We intend to monitor the closing bid price of our common stock and consider our available options to resolve our noncompliance with the Minimum Bid Price Requirement and the Minimum Stockholders' Equity Requirement. There can be no assurance that we will be able to regain compliance with the Minimum Bid Price Requirement or the Minimum Stockholders' Equity Requirement or will otherwise be in compliance with the other listing standards for the Nasdaq Capital Market. A suspension or delisting of our common stock could adversely affect our relationships with our business partners and suppliers and customers' and potential customers' decisions to purchase our products and services, and could have a material, adverse impact on our business and operating results. In addition, a suspension or delisting could impair our ability to raise additional capital through equity or debt financings and our ability to attract and retain employees by means of equity compensation.

Upon a potential delisting from Nasdaq, if our common stock is not then eligible for quotation on another market or exchange, trading of our common stock could be conducted in the over-the-counter market or on an electronic bulletin board

Table of Contents

established for unlisted securities such as the Pink Sheets or the OTC Bulletin Board. In such event, it is likely that there would be significantly less liquidity in the trading of our common stock; decreases in institutional and other investor demand for our common stock, coverage by securities analysts, market making activity and information available concerning trading prices and volume; and fewer broker-dealers willing to execute trades in our common stock. Also, it may be difficult for us to raise additional capital if we are not listed on a major exchange. The occurrence of any of these events could result in a further decline in the market price of our common stock and could have a material adverse effect on us.

*Failure to complete the Merger and private placement could negatively impact our stock price and our future business and financial results.

Although we have agreed to use reasonable efforts to obtain stockholder approval of the proposal to issue shares of our common stock and preferred stock in connection with the Merger, there is no assurance that these proposals will be approved. If these proposals are not approved, and as a result the Merger is not completed:

- Our ongoing business may be adversely affected; and
- We may be required, under certain circumstances, to pay Precipio a termination fee of up to $256,500.

*The announcement and pendency of the Merger may cause disruptions in our business, which could have an adverse effect on our businesses, financial conditions or results of operations.

The announcement and pendency of the Merger could cause disruptions in our business. Specifically:

- our current and prospective employees may experience uncertainty about their future roles with the combined company following completion of the Merger, which might adversely affect our ability to retain key personnel and attract new personnel;
- third parties may seek to terminate and/or renegotiate their relationships with us as a result of the transaction; and
- our management's attention has been focused on the Merger, which may divert management's attention from our core business and other opportunities that could have been beneficial to us.

These disruptions could be exacerbated by a delay in the completion of the Merger or termination of the Merger Agreement and could have an adverse effect on our business, financial condition or results of operations prior to the completion of the Merger.

*The Merger is subject to the receipt of consents and approvals that may not be received.

The Merger Agreement provides that the parties cannot complete the Merger unless they receive various consents and approvals from Nasdaq and other third parties. While we believe that we will receive the requisite approvals, there can be no assurance that such approvals will be received.

*While the Merger is pending, we will be subject to contractual limitations that could adversely affect our business.

The Merger Agreement restricts us from taking certain specified actions while the Merger is pending without Precipio's consent, including incurring indebtedness, making capital expenditures in excess of $5,000, acquiring any assets or selling, leasing or otherwise transferring any assets, and increasing in any material manner the compensation, bonuses or benefits of any directors, officers, employees, former employees or consultants, subject to certain exceptions in the ordinary course of business. These restrictions may prevent us from pursuing otherwise attractive business opportunities that may arise and making other changes to our business prior to the closing of the Merger or termination of the Merger Agreement.

*The Merger Agreement restricts our ability to pursue certain alternatives to the Merger and requires us to pay a reverse termination fee to Precipio if we do.

The Merger Agreement contains non-solicitation provisions that, subject to limited exceptions, restrict our ability to initiate, solicit or encourage or take any action to discuss or accept a competing third-party proposal. Although our Board of Directors is permitted to change its recommendation that stockholders approve the matters relating to the Merger if it determines in good faith that this action is reasonably likely to be required to comply with its fiduciary duties and certain other conditions, doing so in certain situations would require us to pay a termination fee to Precipio of $256,500. Additionally, these non-solicitation provisions could discourage a potential acquiror that might have an interest in acquiring all or a significant part of us from considering or proposing that acquisition, or might result in a potential acquiror proposing to pay a lower per share price to acquire us than it might otherwise have proposed to pay because of the added expense of the termination fee that may become payable to Precipio in certain circumstances.

Table of Contents

*We have incurred substantial expenses in connection with the Merger.

We have incurred and will incur additional substantial expenses in connection with the Merger, whether or not the Merger is completed. These costs include fees for financial advisors, attorneys and accountants, filing fees and financial printing costs. If the Merger is not consummated, we will be responsible for our own expenses, which are not reimbursable in the event the Merger does not occur.

Table of Contents

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

On May 31, 2016, we issued to a vendor an aggregate of 78,000 shares of our common stock and, on June 14, 2016, we issued to a second vendor an aggregate of 64,153 shares of our common stock. Such shares of common stock were issued to the vendors in lieu of an aggregate cash amount of approximately $89,000 owed by us to such vendors for services previously performed by such vendors. We issued the shares to the vendors in transactions exempt from registration under the Securities Act of 1933, as amended (the "Securities Act"), in reliance on the exemptions provided by Section 4(a)(2) of the Securities Act and/or Regulation D promulgated thereunder and in reliance on similar exemptions under applicable state laws. The offering of the shares to the vendors did not involve a public offering, and no general solicitation or advertisement was made in connection with the offering of the shares to the vendors.

Item 6. Exhibits

(a) Exhibits

†2.1	Agreement and Plan of Merger, dated October 12, 2016, by and among Transgenomic, Inc., New Haven Labs Inc. and Precipio Diagnostics, LLC (incorporated by reference to Exhibit 2.1 to the Registrant's Current Report on Form 8-K filed on October 13, 2016).
3.1	Amended and Restated Bylaws of the Registrant.
31.1	Certification of Paul Kinnon, President, Chief Executive Officer and Interim Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, as amended.
32.1	Certification of Paul Kinnon, President, Chief Executive Officer and Interim Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, as amended.
99.1	Form of Voting Agreement, by and among Transgenomic, Inc., Precipio Diagnostics, LLC, and certain holders of Transgenomic common stock (incorporated by reference to Exhibit 99.1 to the Registrant's Current Report on Form 8-K filed on October 13, 2016).
99.2	Form of Voting Agreement, by and among Transgenomic, Inc., Precipio Diagnostics, LLC, and certain members and warrantholders of Precipio (incorporated by reference to Exhibit 99.2 to the Registrant's Current Report on Form 8-K filed on October 13, 2016).
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 Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

† Pursuant to Item 601(b)(2) of Regulation S-K, the schedules to this agreement have been omitted. The Registrant agrees to furnish supplementally a copy of any omitted schedule to the Securities and Exchange Commission upon request.

48

Table of Contents

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.

TRANSGENOMIC, INC.

Date: November 14, 2016 By: /S/ PAUL KINNON
Paul Kinnon
President, Chief Executive Officer and Interim Chief Financial Officer (Principal Executive Officer and Principal Financial Officer)