

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

FORM 10-Q

(Mark One)

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

For the quarterly period ended March 31, 2015 or

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

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission File Number 0-21615

# PRESSURE BIOSCIENCES, INC.

(Exact name of registrant as specified in its charter)

**Massachusetts**

(State or other jurisdiction of  
incorporation or organization)

**04-2652826**

(I.R.S. Employer  
Identification No.)

**14 Norfolk Avenue**

**South Easton, Massachusetts**  
Address of principal executive offices)

**02375**

(Zip Code)

**(508) 230-1828**

(Registrant's telephone number, including area code)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes  No

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

Large accelerated filer

Non-accelerated filer

Accelerated filer

Smaller reporting company

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

Yes  No

The number of shares outstanding of the Issuer's common stock as of May 12, 2015 was 19,725,654

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**PART I - FINANCIAL INFORMATION**

**Item 1. Financial Statements**

**PRESSURE BIOSCIENCES, INC. AND SUBSIDIARY  
CONDENSED CONSOLIDATED BALANCE SHEETS**

ASSETS	March 31, 2015	December 31, 2014
	(Unaudited)	(Audited)
<b>CURRENT ASSETS</b>		
Cash and cash equivalents	\$ 220,310	\$ 473,948
Accounts receivable	323,413	272,022
Inventories, net of \$50,000 reserve at March 31, 2015 and December 31, 2014	798,995	850,552
Prepaid income taxes	7,381	7,381
Prepaid expenses and other current assets	127,040	104,204
Total current assets	1,477,139	1,708,107
Property and equipment, net	29,106	36,025
<b>TOTAL ASSETS</b>	<b>\$ 1,506,245</b>	<b>\$ 1,744,132</b>
 <b>LIABILITIES AND STOCKHOLDERS' DEFICIT</b>		
<b>CURRENT LIABILITIES</b>		
Accounts payable	\$ 920,111	\$ 1,035,781
Accrued employee compensation	157,331	157,347
Accrued professional fees and other	809,332	719,432
Deferred revenue	54,274	27,117
Convertible debt, net of debt discount of \$915,052 and \$328,681, respectively	906,902	1,004,513
Other debt	327,262	80,480
Warrant derivative liability	210,906	159,875
Conversion option liability	1,342,885	590,341
Total current liabilities	4,729,003	3,774,886
<b>LONG TERM LIABILITIES</b>		
Deferred revenue	-	28,977
<b>TOTAL LIABILITIES</b>	4,729,003	3,803,863
<b>COMMITMENTS AND CONTINGENCIES (Note 4)</b>		
<b>STOCKHOLDERS' DEFICIT</b>		
Series D Convertible Preferred Stock, \$.01 par value; 850 shares authorized; 300 shares issued and outstanding on March 31, 2015 and December 31, 2014 (Liquidation value of \$300,000)	3	3
Series G Convertible Preferred Stock, \$.01 par value; 240,000 shares authorized; 86,570 shares issued and outstanding on March 31, 2015 and December 31, 2014	866	866
Series H Convertible Preferred Stock, \$.01 par value; 10,000 shares authorized; 10,000 shares issued and outstanding on March 31, 2015 and December 31, 2014	100	100
Series H2 Convertible Preferred Stock, \$.01 par value; 21 shares authorized; 21 shares issued and outstanding on March 31, 2015 and December 31, 2014	-	-
Series J Convertible Preferred Stock, \$.01 par value; 6,250 shares authorized; 3,546 shares issued and outstanding on March 31, 2015 and December 31, 2014	36	36
Series K Convertible Preferred Stock, \$.01 par value; 15,000 shares authorized; 11,416 shares issued and outstanding on March 31, 2015 and December 31, 2014	114	114
Common stock, \$.01 par value; 65,000,000 shares authorized; 19,214,131 and 18,673,390 shares issued and outstanding on March 31, 2015 and December 31, 2014, respectively	192,141	186,734
Warrants to acquire common stock	5,300,310	5,253,566
Additional paid-in capital	25,466,508	24,617,564
Accumulated deficit	(34,182,836)	(32,118,714)
Total stockholders' deficit	(3,222,758)	(2,059,731)
<b>TOTAL LIABILITIES AND STOCKHOLDERS' DEFICIT</b>	<b>\$ 1,506,245</b>	<b>\$ 1,744,132</b>

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

**PRESSURE BIOSCIENCES, INC. AND SUBSIDIARY**  
**CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS**  
**(UNAUDITED)**

	For the Three Months Ended March 31,	
	2015	2014
<b>Revenue:</b>		
Products, services, other	\$ 359,364	\$ 404,147
Grant revenue	80,770	-
Total revenue	440,134	404,147
<b>Costs and expenses:</b>		
Cost of products and services	190,783	177,606
Research and development	231,923	231,088
Selling and marketing	166,223	171,340
General and administrative	726,024	606,479
Total operating costs and expenses	1,314,953	1,186,513
Operating loss	(874,819)	(782,366)
<b>Other (expense) income:</b>		
Interest expense	(605,585)	(244,612)
Other expense	(345,241)	-
Change in fair value of derivative liabilities	(221,810)	(732,677)
Total other expense	(1,172,636)	(977,289)
Net loss	(2,047,455)	(1,759,655)
Accrued dividends on convertible preferred stock	(16,668)	(44,987)
Deemed dividends on convertible preferred stock	-	(1,280,066)
Net loss applicable to common shareholders	\$ (2,064,123)	\$ (3,084,708)
Net loss per share attributable to common stockholders - basic and diluted	\$ (0.11)	\$ (0.25)
Weighted average common stock shares outstanding used in the basic and diluted net loss per share calculation	18,840,390	12,122,045

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

**PRESSURE BIOSCIENCES, INC. AND SUBSIDIARY**  
**CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS**  
**(UNAUDITED)**

	For the Three Months Ended March 31,	
	2015	2014
<b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>		
Net loss	\$ (2,047,455)	\$ (1,759,655)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	6,919	19,642
Accretion of interest and amortization of debt issue costs	425,226	210,129
Conversion option value in excess of debt	308,328	-
Stock-based compensation expense	54,890	18,896
Amortization of third party fees paid in common stock	46,744	17,192
Change in fair value of derivative liabilities	221,810	732,677
Changes in operating assets and liabilities:		
Accounts receivable	(51,391)	(30,727)
Inventories	51,557	(50,076)
Accounts payable	(115,670)	(89,987)
Accrued employee compensation	(16)	(17,982)
Deferred revenue and other accrued expenses	71,412	(95,377)
Prepaid expenses and other current assets	(22,836)	(58,647)
Net cash used in operating activities	<u>(1,050,482)</u>	<u>(1,103,915)</u>
<b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>		
Purchases of property plant and equipment	-	(5,097)
Net cash used in investing activities	<u>-</u>	<u>(5,097)</u>
<b>CASH FLOWS FROM FINANCING ACTIVITIES:</b>		
Net proceeds from related party debt	6,300	-
Payment of related party debt	(12,300)	(19,933)
Net proceeds from convertible debt	1,054,750	270,000
Payments on convertible debt	(500,500)	(203,100)
Net proceeds from non-convertible debt	396,127	-
Payments on non-convertible debt	(147,534)	(109,695)
Net proceeds from the issuance of common stock	-	112,500
Net proceeds from the issuance of convertible preferred stock	-	1,456,360
Net cash provided by financing activities	<u>796,844</u>	<u>1,506,132</u>
Change in cash and cash equivalents	(253,638)	397,120
Cash and cash equivalents, beginning of period	473,948	31,417
Cash and cash equivalents, end of period	<u>\$ 220,310</u>	<u>\$ 428,537</u>
<b>SUPPLEMENTAL INFORMATION:</b>		
Interest paid in cash	\$ 203,311	\$ 20,258
<b>NON CASH FINANCING ACTIVITY:</b>		
Convertible debt exchanged for convertible preferred stock	-	270,000
Accrued dividends on preferred stock	16,668	44,987
Issuance of convertible preferred stock for interest	-	30,000
Issuance of convertible preferred stock for board of director and other fees	-	92,750
Deemed dividend on convertible preferred stock	-	1,280,066
Convertible debt exchanged for common stock	138,000	37,500
Reclassification of conversion option liabilities into equity	661,464	199,507
Reclassification of warrant liability into equity	-	255,137

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

## 1) **Business Overview, Liquidity and Management Plans**

We are focused on solving the challenging problems inherent in biological sample preparation, a crucial laboratory step performed by scientists worldwide working in biological life sciences research. Sample preparation is a term that refers to a wide range of activities that precede most forms of scientific analysis. Sample preparation is often complex, time-consuming and, in our belief, one of the most error-prone steps of scientific research. It is a widely-used laboratory undertaking – the requirements of which drive what we believe is a large and growing worldwide market. We have developed and patented a novel, enabling technology platform that can control the sample preparation process. It is based on harnessing the unique properties of high hydrostatic pressure. This process, called pressure cycling technology, or PCT, uses alternating cycles of hydrostatic pressure between ambient and ultra-high levels i.e., 35,000 pounds per square inch (“*psi*”) or greater to safely, conveniently and reproducibly control the actions of molecules in biological samples, such as cells and tissues from human, animal, plant and microbial sources.

Our pressure cycling technology uses internally developed instrumentation that is capable of cycling pressure between ambient and ultra-high levels at controlled temperatures and specific time intervals, to rapidly and repeatedly control the interactions of bio-molecules, such as deoxyribonucleic acid (“*DNA*”), ribonucleic acid (“*RNA*”), proteins, lipids and small molecules. Our laboratory instrument, the Barocycler<sup>®</sup>, and our internally developed consumables product line, which include our Pressure Used to Lyse Samples for Extraction (“*PULSE*”) tubes, and other processing tubes, and application specific kits such as consumable products and reagents, together make up our PCT Sample Preparation System (“*PCT SPS*”).

We are also the exclusive distributor throughout all of the Americas for the Constant Systems cell disruption equipment, parts, and consumables. Constant Systems, Ltd (“*CS*”), a British company located about 90 minutes northwest of London, England, has been providing niche biomedical equipment, related consumable products, and services to a global client base since 1989. *CS* designs, develops, and manufactures high pressure cell disruption equipment required by life sciences laboratories worldwide, particularly disruption systems for the extraction of proteins. The *CS* equipment provides a constant and controlled cell disruptive environment, giving the user superior, constant, and reproducible results whatever the application. *CS* has nearly 900 units installed in over 40 countries worldwide. The *CS* cell disruption equipment has proven performance in the extraction of cellular components, such as protein from yeast, bacteria, mammalian cells, and other sample types.

The *CS* pressure-based cell disruption equipment and the *PBI* PCT instrumentation complement each other in several important ways. While both the *CS* and *PBI* technologies are based on high pressure, each product line has fundamental scientific capabilities that the other does not offer. *PBI*'s PCT Platform uses certain patented pressure mechanisms to achieve small-scale, molecular level effects. *CS*'s technology uses different, proprietary pressure mechanisms for larger-scale, non-molecular level processing. In a number of routine laboratory applications, such as protein extraction, both effects can be critical to success. Therefore, for protein extraction and a number of other important scientific applications, we believe laboratories will benefit by using the *CS* and *PBI* products, either separately or together.

We have experienced negative cash flows from operations with respect to our pressure cycling technology business since our inception. As of March 31, 2015, we did not have adequate working capital resources to satisfy our current liabilities and as a result, there is substantial doubt regarding our ability to continue as a going concern. We have been successful in raising cash through debt and equity offerings in the past and as described in Note 6, completed debt financing subsequent to March 31, 2015. We have financing efforts in place to continue to raise cash through debt and equity offerings.

Management has developed a plan to continue operations. This plan includes obtaining equity or debt financing. During the quarter ended March 31, 2015 we received \$1,450,877 net, in additional convertible and non-convertible debt. Although we have successfully completed financings and reduced expenses in the past, we cannot assure you that our plans to address these matters in the future will be successful.

We need substantial additional capital to fund normal operations in future periods. In the event that we are unable to obtain financing on acceptable terms, or at all, we will likely be required to cease our operations, pursue a plan to sell our operating assets, or otherwise modify our business strategy, which could materially harm our future business prospects.

## 2) Interim Financial Reporting

The accompanying unaudited condensed consolidated financial statements of Pressure BioSciences, Inc. have been prepared in accordance with accounting principles generally accepted in the United States of America (“generally accepted accounting principles” or “GAAP”) for interim financial information. Accordingly, they do not include all of the information and footnotes required by generally accepted accounting principles for complete financial statements. In the opinion of management, all material adjustments (consisting of only normal recurring adjustments) considered necessary for a fair presentation have been included. Operating results for the three months ended March 31, 2015 are not necessarily indicative of the results that may be expected for the year ending December 31, 2015. For further information, refer to the audited consolidated financial statements and footnotes thereto included in the Company’s Annual Report on Form 10-K (the “Form 10-K”) for the fiscal year ended December 31, 2014 as filed with the Securities and Exchange Commission on March 31, 2015.

## 3) Summary of Significant Accounting Policies

### *Principles of Consolidation*

The condensed consolidated financial statements include the accounts of Pressure BioSciences, Inc., and its wholly-owned subsidiary PBI BioSeq, Inc. All intercompany accounts and transactions have been eliminated in consolidation.

### *Use of Estimates*

To prepare our condensed consolidated financial statements in conformity with accounting principles generally accepted in the United States of America, we are required to make significant 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 revenues and expenses during the reporting period. In addition, significant estimates were made in projecting future cash flows to quantify deferred tax assets, the costs associated with fulfilling our warranty obligations for the instruments that we sell, and the estimates employed in our calculation of fair value of stock options awarded and warrant derivative liability. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results could differ from the estimates and assumptions used.

### *Revenue Recognition*

We recognize revenue in accordance with FASB ASC 605, *Revenue Recognition*. Revenue is recognized when realized or earned when all the following criteria have been met: persuasive evidence of an arrangement exists; delivery has occurred and risk of loss has passed to the customer; the seller’s price to the buyer is fixed or determinable; and collectability is reasonably assured.

Our current instruments, the Barocyler NEP3229 and NEP2320, require a basic level of instrumentation expertise to set-up for initial operation. To support a favorable first experience for our customers, we send a highly trained technical representative to the customer site to install every Barocyler that we sell or lease domestically. The installation process includes uncrating and setting up the instrument, followed by introductory user training. Product revenue related to current Barocyler instrumentation is recognized upon the completion of the installation and introductory training process of the Barocyler NEP3229 and NEP2320 instrumentation at the customer location, for domestic installations. Product revenue related to sales of PCT instrumentation to our foreign distributors and overseas customers, to our domestic distributors, and to our new Barocyler HUB440 instrument is recognized upon shipment through a common carrier unless installation is specifically requested by the customer. We provide for the expected costs of warranty upon the recognition of revenue for the sales of our instrumentation. Our sales arrangements do not provide our customers with a right of return. Product revenue related to the HUB440 and our consumable products such as PULSE Tubes, MicroTubes, and application specific kits is recorded upon shipment through a common carrier. Shipping costs are included in sales and marketing expense. Any shipping costs billed to customers are recognized as revenue.

In accordance with FASB ASC 840, *Leases*, we account for our lease agreements under the operating method. We record revenue over the life of the lease term and we record depreciation expense on a straight-line basis over the thirty-six month estimated useful life of the Barocyler instrument. The depreciation expense associated with assets under lease agreement is included in the “Cost of products and services” line item in our condensed consolidated statements of operations. Many of our lease and rental agreements allow the lessee to purchase the instrument at any point during the term of the agreement with partial or full credit for payments previously made. We pay all maintenance costs associated with the instrument during the term of the leases.

Revenue from government grants is recorded when expenses are incurred under the grant in accordance with the terms of the grant award.

Our transactions sometimes involve multiple elements (i.e., products and services). Revenue under multiple element arrangements is recognized in accordance with FASB ASC 605-25 *Multiple-Element Arrangements* ("ASC 605"). When vendor specific objective evidence or third party evidence of selling price for deliverables in an arrangement cannot be determined, the Company develops a best estimate of the selling price to separate deliverables and allocates arrangement consideration using the relative selling price method. Additionally, this guidance eliminates the residual method of allocation. If an arrangement includes undelivered elements that are not essential to the functionality of the delivered elements, we defer the fair value of the undelivered elements based on the estimated selling price of the total arrangement. Fair value is determined based upon the price charged when the element is sold separately. If there is not sufficient evidence of the fair value of the undelivered elements, no revenue is allocated to the delivered elements and the total consideration received is deferred until delivery of those elements for which objective and reliable evidence of the fair value is not available. We provide certain customers with extended service contracts with revenue recognized ratably over the life of the contract.

#### *Cash and Cash Equivalents*

Our policy is to invest available cash in short-term, investment-grade, interest-bearing obligations, including money market funds, and bank and corporate debt instruments. Securities purchased with initial maturities of three months or less are valued at cost plus accrued interest, which approximates fair market value, and are classified as cash equivalents.

#### *Research and Development*

Research and development costs, which are comprised of costs incurred in performing research and development activities including wages and associated employee benefits, facilities, consumable products and overhead costs that are expensed as incurred. In support of our research and development activities we utilize our Barocycler instruments that are capitalized as fixed assets and depreciated over their expected useful life.

#### *Inventories*

Inventories are valued at the lower of cost (average cost) or market (sales price). The cost of Barocycler instruments consists of the cost charged by the contract manufacturer. The cost of manufactured goods includes material, freight-in, direct labor, and applicable overhead. The composition of inventory as of March 31, 2015 and December 31, 2014 is as follows:

	<u>March 31,</u> <u>2015</u>	<u>December 31,</u> <u>2014</u>
Raw materials	\$ 306,105	\$ 304,928
Finished goods	542,890	595,624
Inventory reserve	(50,000)	(50,000)
Total	<u>\$ 798,995</u>	<u>\$ 850,552</u>

#### *Property and Equipment*

Property and equipment are stated at cost, less accumulated depreciation. For financial reporting purposes, depreciation is recognized using the straight-line method, allocating the cost of the assets over their estimated useful lives of three years for certain laboratory equipment, from three to five years for management information systems and office equipment, and three years for all PCT finished units classified as fixed assets.

#### *Intangible Assets*

We have classified as intangible assets, costs associated with the fair value of acquired intellectual property. Intangible assets including patents were amortized on a straight-line basis over sixteen years and became fully amortized at December 31, 2014. The Company's intangible assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable. When impairment is indicated, any excess of carrying value over fair value is recorded as a loss.

#### *Long-Lived Assets and Deferred Costs*

In accordance with FASB ASC 360-10-05, *Property, Plant, and Equipment*, if indicators of impairment exist, we assess the recoverability of the affected long-lived assets by determining whether the carrying value of such assets can be recovered through the undiscounted future operating cash flows related to the long-lived assets. If impairment is indicated, we measure the amount of such impairment by comparing the carrying value of the asset to the fair value of the asset and record the impairment as a reduction in the carrying value of the related asset and a charge to operating results. While our current and historical operating losses and cash flow are indicators of impairment, we performed an impairment analysis at December 31, 2014 and determined that our long-lived assets were not impaired.



*Accounts Receivable and Allowance for Doubtful Accounts*

We maintain allowances for estimated losses resulting from the inability of our customers to make required payments. Judgments are used in determining the allowance for doubtful accounts and are based on a combination of factors. Such factors include historical collection experience, credit policy and specific customer collection issues. In circumstances where we are aware of a specific customer's inability to meet its financial obligations to us (e.g., due to a bankruptcy filing), we record a specific reserve for bad debts against amounts due to reduce the net recognized receivable to the amount we reasonably believe will be collected. We perform ongoing credit evaluations of our customers and continuously monitor collections and payments from our customers. As of March 31, 2015 and December 31, 2014, there was no allowance for bad debts.

*Concentrations*

*Credit Risk*

Our financial instruments that potentially subject us to concentrations of credit risk consist primarily of cash, cash equivalents, and trade receivables. We have cash investment policies which, among other things, limit investments to investment-grade securities. We perform ongoing credit evaluations of our customers, and the risk with respect to trade receivables is further mitigated by the fact that many of our customers are government institutions, large pharmaceutical and biotechnology companies, and academic laboratories.

The following table illustrates the level of concentration as a percentage of total revenues during the three months ended March 31, 2015 and 2014.

	For the Three Months Ended March 31,	
	2015	2014
Top Five Customers	64%	65%
Federal Agencies	26%	1%

The following table illustrates the level of concentration as a percentage of net accounts receivable balance as of March 31, 2015 and December 31, 2014:

	March 31,	December 31,
	2015	2014
Top Five Customers	70%	86%
Federal Agencies	19%	9%

*Product Supply*

Bit Group, Inc. has been our sole contract manufacturer for our PCT NEP3229 and NEP2320 instrumentation.

### Computation of Loss per Share

Basic loss per share is computed by dividing loss available to common shareholders by the weighted average number of common shares outstanding. Diluted loss per share is computed by dividing loss available to common shareholders by the weighted average number of common shares outstanding plus additional common shares that would have been outstanding if dilutive potential common shares had been issued. For purposes of this calculation, convertible preferred stock, common stock dividends, and warrants and options to acquire common stock, are all considered common stock equivalents in periods in which they have a dilutive effect and are excluded from this calculation in periods in which these are anti-dilutive to our net loss.

The following table illustrates our computation of loss per share for the three months ended March 31, 2015 and 2014:

	For the Three Months Ended March 31,	
	2015	2014
<b>Numerator:</b>		
Net loss	\$ (2,047,455)	\$ (1,759,655)
Accrued dividend for Preferred Stock	(16,668)	(44,987)
Deemed dividend on Series K Convertible Preferred Stock	-	(1,280,066)
Net loss applicable to common shareholders	<u>\$ (2,064,123)</u>	<u>\$ (3,084,708)</u>
<b>Denominator for basic and diluted loss per share:</b>		
Weighted average common stock shares outstanding	18,840,390	12,122,045
Loss per common share - basic and diluted	\$ (0.11)	\$ (0.25)

The following table presents securities that could potentially dilute basic loss per share in the future. For all periods presented, the potentially dilutive securities were not included in the computation of diluted loss per share because these securities would have been anti-dilutive to our net loss. The Series D Convertible Preferred Stock, Series G Convertible Preferred Stock, Series H Convertible Preferred Stock, Series J Convertible Preferred Stock and Series K Convertible Preferred Stock are presented below as if they were converted into common shares according to their respective conversion terms.

	For the Three Months Ended March 31,	
	2015	2014
Stock options	3,406,250	1,730,750
Convertible debt	8,555,938	932,500
Common stock warrants	19,182,201	18,222,827
<b>Convertible preferred stock:</b>		
Series D Convertible Preferred Stock	750,000	750,000
Series G Convertible Preferred Stock	865,700	1,453,200
Series H Convertible Preferred Stock	1,000,000	1,000,000
Series H2 Convertible Preferred Stock	2,100,000	-
Series J Convertible Preferred Stock	3,546,000	5,087,500
Series K Convertible Preferred Stock	11,416,000	10,729,000
	<u>50,822,089</u>	<u>39,905,777</u>

### Accounting for Income Taxes

We account for income taxes under the asset and liability method, which requires recognition of deferred tax assets, subject to valuation allowances, and liabilities for the expected future tax consequences of events that have been included in the financial statements or tax returns. Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting and income tax purposes. A valuation allowance is established if it is more likely than not that all or a portion of the net deferred tax assets will not be realized.

### *Warrant Derivative Liability*

The warrants issued in connection with the registered direct offering of Series D Convertible Preferred Stock (the “Series D Warrants”) are measured at fair value and liability-classified because the Series D Warrants contain “down-round protection” and therefore, do not meet the scope exception under ASC 815, *Derivatives and Hedging*, (“ASC 815”). Since “down-round protection” is not an input into the calculation of the fair value of the warrants, the warrants cannot be considered indexed to the Company’s own stock which is a requirement for the scope exception as outlined under ASC 815. The estimated fair value of the warrants was determined using the binomial model, resulting in an allocation of the gross proceeds of \$283,725 to the warrants issued in the Series D registered direct offering. The fair value will be affected by changes in inputs to that model including our stock price, expected stock price volatility, the contractual term, and the risk-free interest rate. We will continue to classify the fair value of the warrants as a liability until the warrants are exercised, expire or are amended in a way that would no longer require these warrants to be classified as a liability, whichever comes first. The down-round protection for the Series D Warrants survives for the life of the Series D Warrants which ends in May 2017.

### *Conversion Option Liability*

The Company has signed a number of convertible notes and has determined that conversion options are embedded in the notes and require bifurcation of the conversion option from the host contract under ASC 815 and account for the derivatives at fair value. The estimated fair value of the conversion options was determined using the binomial model. The fair value of the conversion options will be classified as a liability until the debt is converted by the note holders or paid back by the Company or are amended in a way that would no longer require these conversion options to be classified as a liability, whichever comes first. The fair value will be affected by changes in inputs to that model including our stock price, expected stock price volatility, the contractual term, and the risk-free interest rate. The Company has adopted a sequencing policy that reclassifies contracts (from equity to liabilities) with the most recent inception date first. Thus any available shares are allocated first to contracts with the most recent inception dates.

### *Accounting for Stock-Based Compensation Expense*

We maintain equity compensation plans under which incentive stock options and non-qualified stock options are granted to employees, independent members of our Board of Directors and outside consultants. We recognize stock-based compensation expense over the requisite service period using the Black-Scholes formula to estimate the fair value of the stock options on the date of grant.

### Determining Fair Value of Stock Option Grants

**Valuation and Amortization Method** - The fair value of each option award is estimated on the date of grant using the Black-Scholes pricing model based on certain assumptions. The estimated fair value of employee stock options is amortized to expense using the straight-line method over the vesting period, which is over four years for options granted in 2014 and 2015.

**Expected Term** - The Company uses the simplified calculation of expected life, as the Company does not currently have sufficient historical exercise data on which to base an estimate of expected term. Using this method, the expected term is determined using the average of the vesting period and the contractual life of the stock options granted.

**Expected Volatility** - Expected volatility is based on the Company’s historical stock volatility data over the expected term of the award.

**Risk-Free Interest Rate** - The Company bases the risk-free interest rate used in the Black-Scholes valuation method on the implied yield currently available on U.S. Treasury zero-coupon issues with an equivalent remaining term.

**Forfeitures** - The Company records stock-based compensation expense only for those awards that are expected to vest. The Company estimated a forfeiture rate of 5% for awards granted based on historical experience and future expectations of options vesting. The Company used this historical rate as our assumption in calculating future stock-based compensation expense.

The Company recognized stock-based compensation expense of \$54,890 and \$18,896 for the three months ended March 31, 2015 and 2014, respectively. The following table summarizes the effect of this stock-based compensation expense within each of the line items of our costs and expenses within our Condensed Consolidated Statements of Operations:

	For the Three Months Ended March 31,	
	2015	2014
Research and development	\$ 11,343	\$ 7,553
Selling and marketing	6,975	5,991
General and administrative	36,572	5,352
Total stock-based compensation expense	<u>\$ 54,890</u>	<u>\$ 18,896</u>

#### *Fair Value of Financial Instruments*

Due to their short maturities, the carrying amounts for cash and cash equivalents, accounts receivable, accounts payable, and accrued expenses approximate their fair value. Long-term liabilities are primarily related to liabilities transferred under contractual arrangements with carrying values that approximate fair value.

#### *Fair Value Measurements*

The Company follows the guidance of FASB ASC Topic 820, “Fair Value Measurements and Disclosures” (“ASC 820”) as it related to all financial assets and financial liabilities that are recognized or disclosed at fair value in the financial statements on a recurring basis.

The Company generally defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (exit price). The Company uses a three-tier fair value hierarchy, which classifies the inputs used in measuring fair values. These tiers include: Level 1, defined as observable inputs such as quoted prices for identical instruments in active markets; Level 2, defined as inputs other than quoted prices in active markets that are either directly or indirectly observable; and Level 3, defined as unobservable inputs in which little or no market data exists, therefore requiring the Company to develop its own assumptions.

Financial assets and liabilities are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. The Company has determined that it does not have any financial assets measured at fair value and that its financial liabilities are currently all classified within Level 3 in the fair value hierarchy. The development of the unobservable inputs for Level 3 fair value measurements and fair value calculations are the responsibility of the Company’s management.

The following tables set forth the Company’s financial liabilities that were accounted for at fair value on a recurring basis as of March 31, 2015.

	March 31, 2015	Fair value measurements at March 31, 2015 using:		
		Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Series D Preferred Stock Purchase Warrants	<u>\$ 210,906</u>	<u>-</u>	<u>-</u>	<u>\$ 210,906</u>
	January 1, 2015	Change in Fair Value	Reclassified to Equity	March 31, 2015
Series D Preferred Stock Purchase Warrants	<u>\$ 159,875</u>	<u>\$ 51,031</u>	<u>-</u>	<u>\$ 210,906</u>

The assumptions for the binomial pricing model are represented in the table below for the warrants issued in the Series D private placement reflected on a per share common stock equivalent basis.

Assumptions	November 10, 2011	Warrants revalued at December 31, 2014	Warrants revalued at March 31, 2015
Expected life (in months)	60.0	22.0	19.0
Expected volatility	104.5%	116.0%	124.4%
Risk-free interest rate	0.875%	0.58%	0.31%
Exercise price	\$ 0.81	\$ 0.25	\$ 0.25
Fair value per warrant	\$ 0.54	\$ 0.15	\$ 0.20

The following tables represent the conversion option liabilities at March 31, 2015 and changes during the quarter ended March 31, 2015.

	March 31, 2015	Fair value measurements at March 31, 2015 using:		
		Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
September 26, 2014 note, conversion option	\$ 119,355			\$ 119,355
November 10, 2014 note, conversion option	107,026			107,026
November 17, 2014 note, conversion option	113,684			113,684
February 2, 2015 note, conversion option	83,672			83,672
February 2, 2015 note, conversion option	100,406			100,406
February 25, 2015 note, conversion option	149,653			149,653
March 4, 2015 note, conversion option	46,080			46,080
March 9, 2015 note, conversion option	70,447			70,447
March 17, 2015 note, conversion option	176,147			176,147
March 17, 2015 note, conversion option	38,448	-	-	38,448
March 20, 2015 note, conversion option	17,789	-	-	17,789
March 26, 2015 note conversion option	138,585	-	-	138,585
March 27, 2015 note, conversion option	46,538	-	-	46,538
March 27, 2015 note, conversion option	135,055	-	-	135,055
Embedded conversion options	<u>\$ 1,342,885</u>	<u>-</u>	<u>-</u>	<u>\$ 1,342,885</u>

	<u>Jan. 1, 2015</u>	<u>Issuance fair value</u>	<u>Change in fair value</u>	<u>Reclassification into equity</u>	<u>March 31, 2015</u>
July 7, 2014 note, conversion option	53,673	-	15,026	(68,699)	-
July 7, 2014 note, conversion option	70,604	-	25,574	(96,178)	-
August 28, 2014 note conversion option	25,146	-	63,383	(88,529)	-
September 3 2014 note, conversion option	95,938	-	125,823	(221,761)	-
September 10, 2014 note, conversion option	99,124	-	87,173	(186,297)	-
September 26, 2014 note, conversion option	92,699	-	26,656	-	119,355
November 10, 2014 note, conversion option	74,343	-	32,683	-	107,026
November 17, 2014 note, conversion option	78,814	-	34,870	-	113,684
February 2, 2015 note, conversion option	-	62,219	21,453	-	83,672
February 2, 2015 note, conversion option	-	74,663	25,743	-	100,406
February 25, 2015 note, conversion option	-	312,718	(163,065)	-	149,653
March 4, 2015 note, conversion option	-	53,213	(7,133)	-	46,080
March 9, 2015 note, conversion option	-	61,597	8,850	-	70,447
March 17, 2015 note, conversion option	-	212,918	(36,771)	-	176,147
March 17, 2015 note, conversion option	-	64,382	(25,934)	-	38,448
March 20, 2015 note, conversion option	-	25,077	(7,288)	-	17,789
March 26, 2015 note conversion option	-	164,581	(25,996)	-	138,585
March 27, 2015 note, conversion option	-	57,502	(10,964)	-	46,538
March 27, 2015 note conversion option	-	154,359	(19,304)	-	135,055
Embedded conversion options	<u>\$ 590,341</u>	<u>\$ 1,243,229</u>	<u>\$ 170,779</u>	<u>\$ (661,464)</u>	<u>\$ 1,342,885</u>

The assumptions for the binomial pricing model are represented in the table below for the conversion options reflected on a per share common stock equivalent basis.

Assumptions	<u>July 7, 2014</u>	<u>Conversion options revalued at Jan. 9, 2015</u>
Expected life (in months)	12	6
Expected volatility	117.9%	114.9%
Risk-free interest rate	0.12%	0.12%
Exercise price	\$ 0.21	\$ 0.14
Fair value per conversion option	\$ 0.18	\$ 0.12

Assumptions	July 7, 2014	Conversion options revalued at Jan. 9, 2015
Expected life (in months)	12	6
Expected volatility	117.9%	114.9%
Risk-free interest rate	0.12%	0.12%
Exercise price	\$ 0.21	\$ 0.14
Fair value per conversion option	\$ 0.18	\$ 0.12

Assumptions	August 28, 2014	Conversion options revalued at Feb. 26, 2015
Expected life (in months)	6	-
Expected volatility	104.4%	0.8%
Risk-free interest rate	0.05%	0.01%
Exercise price	\$ 0.14	\$ 0.10
Fair value per conversion option	\$ 0.15	\$ 0.26

Assumptions	Sept. 3, 2014	Conversion options revalued at March 2, 2015
Expected life (in months)	36	-
Expected volatility	153.8%	437.5%
Risk-free interest rate	0.99%	0.01%
Exercise price	\$ 0.35	\$ 0.12
Fair value per conversion option	\$ 0.24	\$ 0.16

Assumptions	Sept. 10, 2014	Conversion options revalued at March 11, 2015
Expected life (in months)	12	2
Expected volatility	117.6%	142.2%
Risk-free interest rate	0.12%	0.18%
Exercise price	\$ 0.13	\$ 0.10
Fair value per conversion option	\$ 0.17	\$ 0.18

Assumptions	Sept. 26, 2014	Conversion options revalued at March 31, 2015
Expected life (in months)	12	6
Expected volatility	116.6%	144.6%
Risk-free interest rate	0.11%	0.17%
Exercise price	\$ 0.16	\$ 0.17
Fair value per conversion option	\$ 0.19	\$ 0.18

Assumptions	Nov. 10, 2014	Conversion options revalued at March 31, 2015
Expected life (in months)	10	5
Expected volatility	104.2%	148.4%
Risk-free interest rate	0.10%	0.18%
Exercise price	\$ 0.13	\$ 0.14
Fair value per conversion option	\$ 0.23	\$ 0.20

Assumptions	Nov. 17, 2014	Conversion options revalued at March 31, 2015
Expected life (in months)	12	7
Expected volatility	117.9%	132.4%
Risk-free interest rate	0.12%	0.15%
Exercise price	\$ 0.17	\$ 0.17
Fair value per conversion option	\$ 0.20	\$ 0.18

Assumptions	Feb. 2, 2015	Conversion options revalued at March 31, 2015
Expected life (in months)	6	4
Expected volatility	111.7%	146.0%
Risk-free interest rate	0.07%	0.07%
Exercise price	\$ 0.14	\$ 0.20
Fair value per conversion option	\$ 0.09	\$ 0.14

Assumptions	Feb. 2, 2015	Conversion options revalued at March 31, 2015
Expected life (in months)	6	4
Expected volatility	111.7%	146.0%
Risk-free interest rate	0.07%	0.07%
Exercise price	\$ 0.14	\$ 0.19
Fair value per conversion option	\$ 0.09	\$ 0.16

Assumptions	Feb. 25, 2015	Conversion options revalued at March 31, 2015
Expected life (in months)	6	5
Expected volatility	132.1%	149.4%
Risk-free interest rate	0.08%	0.08%
Exercise price	\$ 0.10	\$ 0.14
Fair value per conversion option	\$ 0.28	\$ 0.19

Assumptions	March 4, 2015	Conversion options revalued at March 31, 2015
Expected life (in months)	6	5
Expected volatility	138.9%	150.5%
Risk-free interest rate	0.08%	0.08%
Exercise price	\$ 0.17	\$ 0.19
Fair value per conversion option	\$ 0.17	\$ 0.16

Assumptions	March 9, 2015	Conversion options revalued at March 31, 2015
Expected life (in months)	6	5
Expected volatility	139.2%	149.8%
Risk-free interest rate	0.08%	0.08%
Exercise price	\$ 0.20	\$ 0.21
Fair value per conversion option	\$ 0.13	\$ 0.15

Assumptions	March 17, 2015	Conversion options revalued at March 31, 2015
Expected life (in months)	6	6
Expected volatility	143.3%	149.3%
Risk-free interest rate	0.08%	0.08%
Exercise price	\$ 0.21	\$ 0.21
Fair value per conversion option	\$ 0.19	\$ 0.16

Assumptions	March 17, 2015	Conversion options revalued at March 31, 2015
Expected life (in months)	6	6
Expected volatility	143.3%	149.3%
Risk-free interest rate	0.08%	0.08%
Exercise price	\$ 0.17	\$ 0.20
Fair value per conversion option	\$ 0.22	\$ 0.16



Assumptions	March 20, 2015	Conversion options revalued at March 31, 2015
Expected life (in months)	6	6
Expected volatility	140.9%	147.2%
Risk-free interest rate	0.08%	0.08%
Exercise price	\$ 0.20	\$ 0.21
Fair value per conversion option	\$ 0.20	\$ 0.15

Assumptions	March 26, 2015	Conversion options revalued at March 31, 2015
Expected life (in months)	6	6
Expected volatility	143.2%	144.9%
Risk-free interest rate	0.07%	0.07%
Exercise price	\$ 0.18	\$ 0.18
Fair value per conversion option	\$ 0.20	\$ 0.17

Assumptions	March 27, 2015	Conversion options revalued at March 31, 2015
Expected life (in months)	6	6
Expected volatility	142.6%	144.3%
Risk-free interest rate	0.06%	0.06%
Exercise price	\$ 0.18	\$ 0.19
Fair value per conversion option	\$ 0.20	\$ 0.17

Assumptions	March 27, 2015	Conversion options revalued at March 31, 2015
Expected life (in months)	6	6
Expected volatility	142.6%	144.9%
Risk-free interest rate	0.06%	0.06%
Exercise price	\$ 0.14	\$ 0.14
Fair value per conversion option	\$ 0.22	\$ 0.19

#### *Advertising*

Advertising costs are expensed as incurred. We did not incur significant advertising expenses during the three months ended March 31, 2015 or in the same period of the prior year.

#### 4) **Commitments and Contingencies**

##### *Operating Leases*

Our corporate offices are currently located at 14 Norfolk Avenue, South Easton, Massachusetts 02375. In November 2007, we signed a lease agreement commencing in February 2008 pursuant to which we lease approximately 5,500 square feet of office space. We extended the lease term until December 31, 2015 with a monthly payment of \$4,800.

In September 2014 and we moved the lab to approximately 855 square feet of lab space in Medford, MA with a monthly payment of \$3,094. The lease term runs until December 31, 2017.

Rental costs are expensed as incurred. During the three months ended March 31, 2015 and 2014 we incurred \$22,722 and \$30,900 in rent expense, respectively for the use of our corporate office and research and development facilities.

##### *Government Grants*

We received a \$1 million NIH SBLR Phase II Grant. Under the grant the NIH has committed to pay the company to develop a high-throughput, high pressure based DNA Shearing System for Next Generation Sequencing applications. See Note 3, Revenue Recognition.

### *Convertible Debt*

On February 2, 2015, we signed a convertible debenture in the amount of \$100,000. The lender paid an initial payment of \$95,000 net of fees of \$5,000. An interest charge of 4% per annum will be applied to the principal balance. The lender has the right, at any time after 180 days from the issue date to convert any or part of the outstanding and unpaid principal and interest into shares of the Company's common stock at a price of 65% of the average of the three lowest closing prices of the Company's shares during the 15 day period prior to conversion subject to adjustments for stock splits, stock dividends or rights offerings. The Company shall have the right to prepay the debenture for a payment of the outstanding principal plus unpaid interest at any time on or before six months after the effective date. If the Company chooses to prepay it will incur pre-payment penalties ranging from 19% to 33% of the principal balance. The Company is required to reserve at least 3,000,000 shares of common stock for full conversion of this debenture. The maturity date is twelve months after the effective date of the payment. The Company determined that the conversion feature met the definition of a liability in accordance with ASC 815-40 and therefore bifurcated the conversion feature and account for it as a derivative liability. The fair value of the conversion feature was accounted for as a note discount and will be amortized to interest expense over the life of the loan. The fair value of the conversion feature was \$83,672 at March 31, 2015 and reflected in the conversion option liability line in the condensed consolidated balance sheet.

The proceeds from the convertible debt issued on February 2, 2015 were allocated between the host debt instrument and the convertible option based on the residual method. The estimated fair value of the convertible option was determined using a binomial formula, resulting in an allocation of \$62,219 to the convertible option and accounted for as a liability in the Company's condensed consolidated balance sheet. In accordance with the provisions of ASC 815-40, the gross proceeds of \$100,000 is offset by a debt discount of \$67,219 which will be amortized to interest expense over the expected six month life of the debt.

On February 2, 2015, we signed a convertible debenture in the amount of \$120,000. The lender paid an initial payment of \$115,000 net of fees of \$5,000. An interest charge of 4% per annum will be applied to the principal balance. The lender has the right, at any time after 180 days from the issue date to convert any or part of the outstanding and unpaid principal and interest into shares of the Company's common stock at a price of 65% of the average of the three lowest closing prices of the Company's shares during the 15 day period prior to conversion subject to adjustments for stock splits, stock dividends or rights offerings. The Company shall have the right to prepay the debenture for a payment of the outstanding principal plus unpaid interest at any time on or before six months after the effective date. If the Company chooses to prepay it will incur pre-payment penalties ranging from 19% to 33% of the principal balance. The Company is required to reserve at least 2,886,000 shares of common stock for full conversion of this debenture. The maturity date is twelve months after the effective date of the payment. The Company determined that the conversion feature met the definition of a liability in accordance with ASC 815-40 and therefore bifurcated the conversion feature and account for it as a derivative liability. The fair value of the conversion feature was accounted for as a note discount and will be amortized to interest expense over the life of the loan. The fair value of the conversion feature was \$100,406 at March 31, 2015 and reflected in the conversion option liability line in the condensed consolidated balance sheet.

The proceeds from the convertible debt issued on February 2, 2015 were allocated between the host debt instrument and the convertible option based on the residual method. The estimated fair value of the convertible option was determined using a binomial formula, resulting in an allocation of \$74,663 to the convertible option and accounted for as a liability in the Company's condensed consolidated balance sheet. In accordance with the provisions of ASC 815-40, the gross proceeds of \$120,000 is offset by a debt discount of \$79,663 which will be amortized to interest expense over the expected six month life of the debt.

On February 25, 2015, we signed a convertible debenture in the amount of \$112,500. The Company received \$108,500 net of \$4,000 in fees. An interest charge of 8% per annum will be applied to the principal balance. The lender has the right, at any time after 180 days from the issue date to convert any or part of the outstanding and unpaid principal and interest into shares of the Company's common stock at a price of 55% of the average of the three lowest closing prices of the Company's shares during the 30 day period prior to conversion subject to adjustments for stock splits, stock dividends or rights offerings. The Company shall have the right to prepay the debenture for a payment of the outstanding principal plus unpaid interest at any time on or before six months after the effective date. If the Company chooses to prepay it will incur pre-payment penalties ranging from 19% to 33% of the principal balance. The Company is required to reserve at least six times the number of shares of common stock for full conversion of this debenture. The maturity date is twelve months after the effective date of the payment. The Company determined that the conversion feature met the definition of a liability in accordance with ASC 815-40 and therefore bifurcated the conversion feature and account for it as a derivative liability. The fair value of the conversion feature was accounted for as a note discount and will be amortized to interest expense over the life of the loan. The fair value of the conversion feature was \$149,653 at March 31, 2015 and reflected in the conversion option liability line in the condensed consolidated balance sheet.

The proceeds from the convertible debt issued on February 25, 2015 were allocated between the host debt instrument and the convertible option based on the residual method. The estimated fair value of the convertible option was determined using a binomial formula, resulting in an allocation of \$312,847 to the convertible option and accounted for as a liability in the Company's condensed consolidated balance sheet. In accordance with the provisions of ASC 815-40, the gross proceeds of \$112,500 is offset by a debt discount of \$112,500 which will be amortized to interest expense over the expected six month life of the debt. The residual amount of debt discount of \$204,347 in excess of the principal of \$112,500 is charged to other expense on the condensed consolidated statement of operations.

On March 4, 2015, we signed a convertible debenture in the amount of \$52,500. The Company received \$50,000 net of \$2,500 in fees. An interest charge of 4% per annum will be applied to the principal balance. The lender has the right, at any time after 180 days from the issue date to convert any or part of the outstanding and unpaid principal and interest into shares of the Company's common stock at a price of 65% of the average of the three lowest closing prices of the Company's shares during the 15 day period prior to conversion subject to adjustments for stock splits, stock dividends or rights offerings. The Company shall have the right to prepay the debenture for a payment of the outstanding principal plus unpaid interest at any time on or before six months after the effective date. If the Company chooses to prepay it will incur pre-payment penalties ranging from 19% to 38% of the principal balance. The Company is required to reserve at least 873,000 shares of common stock for full conversion of this debenture. The maturity date is twelve months after the effective date of the payment. The Company determined that the conversion feature met the definition of a liability in accordance with ASC 815-40 and therefore bifurcated the conversion feature and account for it as a derivative liability. The fair value of the conversion feature was accounted for as a note discount and will be amortized to interest expense over the life of the loan. The fair value of the conversion feature was \$46,080 at March 31, 2015 and reflected in the conversion option liability line in the condensed consolidated balance sheet.

The proceeds from the convertible debt issued on March 4, 2015 were allocated between the host debt instrument and the convertible option based on the residual method. The estimated fair value of the convertible option was determined using a binomial formula, resulting in an allocation of \$53,213 to the convertible option and accounted for as a liability in the Company's condensed consolidated balance sheet. In accordance with the provisions of ASC 815-40, the gross proceeds of \$52,500 is offset by a debt discount of \$52,500 which will be amortized to interest expense over the expected six month life of the debt. The residual amount of debt discount of \$3,213 in excess of the principal of \$52,500 is charged to other expense on the condensed consolidated statement of operations.

On March 9, 2015, we signed a convertible debenture in the amount of \$100,000. An interest charge of 4% per annum will be applied to the principal balance. The lender has the right, at any time after 180 days from the issue date to convert any or part of the outstanding and unpaid principal and interest into shares of the Company's common stock at a price of 65% of the volume weighted average price ("VWAP") of the Company's shares during the 10 day period prior to conversion subject to adjustments for stock splits, stock dividends or rights offerings. The Company shall have the right to prepay the debenture for a payment of the outstanding principal plus unpaid interest at any time on or before six months after the effective date. If the Company chooses to prepay it will incur pre-payment penalties ranging from 19% to 33% of the principal balance. The Company is required to reserve at least three times the number of shares of common stock for full conversion of this debenture. The maturity date is six months after the effective date of the payment. The Company determined that the conversion feature met the definition of a liability in accordance with ASC 815-40 and therefore bifurcated the conversion feature and account for it as a derivative liability. The fair value of the conversion feature was accounted for as a note discount and will be amortized to interest expense over the life of the loan. The fair value of the conversion feature was \$70,447 at March 31, 2015 and reflected in the conversion option liability line in the condensed consolidated balance sheet.

The proceeds from the convertible debt issued on March 9, 2015 were allocated between the host debt instrument and the convertible option based on the residual method. The estimated fair value of the convertible option was determined using a binomial formula, resulting in an allocation of \$61,597 to the convertible option and accounted for as a liability in the Company's condensed consolidated balance sheet. In accordance with the provisions of ASC 815-40, the gross proceeds of \$100,000 is offset by a debt discount of \$61,597 which will be amortized to interest expense over the expected six month life of the debt.

On March 17, 2015, we signed a convertible debenture in the amount of \$236,250. The company received \$211,800 net of \$24,450 in fees including \$9,450 of restricted stock. An interest charge of 2% per annum will be applied to the principal balance. The lender has the right, at any time after 180 days from the issue date to convert any or part of the outstanding and unpaid principal and interest into shares of the Company's common stock at a price of 65% of the volume weighted average price ("VWAP") of the Company's shares during the 3 day period prior to conversion subject to adjustments for stock splits, stock dividends or rights offerings. The Company shall have the right to prepay the debenture for a payment of the outstanding principal plus unpaid interest at any time on or before six months after the effective date. If the Company chooses to prepay it will incur pre-payment penalties ranging from 19% to 35% of the principal balance. The Company is required to reserve at least 3,000,000 shares of common stock for full conversion of this debenture. The maturity date is twelve months after the effective date of the payment. The Company determined that the conversion feature met the definition of a liability in accordance with ASC 815-40 and therefore bifurcated the conversion feature and account for it as a derivative liability. The fair value of the conversion feature was accounted for as a note discount and will be amortized to interest expense over the life of the loan. The fair value of the conversion feature was \$176,147 at March 31, 2015 and reflected in the conversion option liability line in the condensed consolidated balance sheet.

The proceeds from the convertible debt issued on March 17, 2015 were allocated between the host debt instrument and the convertible option based on the residual method. The estimated fair value of the convertible option was determined using a binomial formula, resulting in an allocation of \$212,918 to the convertible option and accounted for as a liability in the Company's condensed consolidated balance sheet. In accordance with the provisions of ASC 815-40, the gross proceeds of \$236,250 is offset by a debt discount of \$236,250 which will be amortized to interest expense over the expected six month life of the debt.

On March 17, 2015, we signed a convertible debenture in the amount of \$50,000. An interest charge of 4% per annum will be applied to the principal balance. The lender has the right, at any time after 180 days from the issue date to convert any or part of the outstanding and unpaid principal and interest into shares of the Company's common stock at a price of 65% of the lowest volume weighted average price ("VWAP") of the Company's shares during the 10 day period prior to conversion subject to adjustments for stock splits, stock dividends or rights offerings. The Company shall have the right to prepay the debenture for a payment of the outstanding principal plus unpaid interest at any time on or before six months after the effective date. If the Company chooses to prepay it will incur pre-payment penalties ranging from 19% to 33% of the principal balance. The Company is required to reserve at least 1,000,000 shares of common stock for full conversion of this debenture. The maturity date is twelve months after the effective date of the payment. The Company determined that the conversion feature met the definition of a liability in accordance with ASC 815-40 and therefore bifurcated the conversion feature and account for it as a derivative liability. The fair value of the conversion feature was accounted for as a note discount and will be amortized to interest expense over the life of the loan. The fair value of the conversion feature was \$38,448 at March 31, 2015 and reflected in the conversion option liability line in the condensed consolidated balance sheet.

The proceeds from the convertible debt issued on March 17, 2015 were allocated between the host debt instrument and the convertible option based on the residual method. The estimated fair value of the convertible option was determined using a binomial formula, resulting in an allocation of \$64,382 to the convertible option and accounted for as a liability in the Company's condensed consolidated balance sheet. In accordance with the provisions of ASC 815-40, the gross proceeds of \$50,000 is offset by a debt discount of \$50,000 which will be amortized to interest expense over the expected six month life of the debt. The residual amount of debt discount of \$14,382 in excess of the principal of \$50,000 is charged to other expense on the condensed consolidated statement of operations.

On March 20, 2015, we signed a convertible debenture in the amount of \$25,000. An interest charge of 4% per annum will be applied to the principal balance. The lender has the right, at any time after 180 days from the issue date to convert any or part of the outstanding and unpaid principal and interest into shares of the Company's common stock at a price of 65% of the volume weighted average price ("VWAP") of the Company's shares during the 10 day period prior to conversion subject to adjustments for stock splits, stock dividends or rights offerings. The Company shall have the right to prepay the debenture for a payment of the outstanding principal plus unpaid interest at any time on or before six months after the effective date. If the Company chooses to prepay it will incur pre-payment penalties ranging from 19% to 33% of the principal balance. The Company is required to reserve at least three times the number of shares of common stock for full conversion of this debenture. The maturity date is twelve months after the effective date of the payment. The Company determined that the conversion feature met the definition of a liability in accordance with ASC 815-40 and therefore bifurcated the conversion feature and account for it as a derivative liability. The fair value of the conversion feature was accounted for as a note discount and will be amortized to interest expense over the life of the loan. The fair value of the conversion feature was \$17,789 at March 31, 2015 and reflected in the conversion option liability line in the condensed consolidated balance sheet.

The proceeds from the convertible debt issued on March 20, 2015 were allocated between the host debt instrument and the convertible option based on the residual method. The estimated fair value of the convertible option was determined using a binomial formula, resulting in an allocation of \$25,077 to the convertible option and accounted for as a liability in the Company's condensed consolidated balance sheet. In accordance with the provisions of ASC 815-40, the gross proceeds of \$25,000 is offset by a debt discount of \$25,000 which will be amortized to interest expense over the expected six month life of the debt. The residual amount of debt discount of \$77 in excess of the principal of \$25,000 is charged to other expense on the condensed consolidated statement of operations.

On March 26, 2015, we signed a convertible debenture in the amount of \$150,000. The Company received \$148,000 net of \$2,000 in fees. An interest charge of 6% per annum will be applied to the principal balance. The lender has the right, at any time after 180 days from the issue date to convert any or part of the outstanding and unpaid principal and interest into shares of the Company's common stock at a price of 65% of the average of the three lowest prices of the Company's shares during the 15 day period prior to conversion subject to adjustments for stock splits, stock dividends or rights offerings. The Company shall have the right to prepay the debenture for a payment of the outstanding principal plus unpaid interest at any time on or before six months after the effective date. If the Company chooses to prepay it will incur pre-payment penalties ranging from 19% to 37.5% of the principal balance. The Company is required to reserve at least 3,336,000 shares of common stock for full conversion of this debenture. The maturity date is twelve months after the effective date of the payment. The Company determined that the conversion feature met the definition of a liability in accordance with ASC 815-40 and therefore bifurcated the conversion feature and account for it as a derivative liability. The fair value of the conversion feature was accounted for as a note discount and will be amortized to interest expense over the life of the loan. The fair value of the conversion feature was \$138,505 at March 31, 2015 and reflected in the conversion option liability line in the condensed consolidated balance sheet.

The proceeds from the convertible debt issued on March 26, 2015 were allocated between the host debt instrument and the convertible option based on the residual method. The estimated fair value of the convertible option was determined using a binomial formula, resulting in an allocation of \$164,501 to the convertible option and accounted for as a liability in the Company's condensed consolidated balance sheet. In accordance with the provisions of ASC 815-40, the gross proceeds of \$150,000 is offset by a debt discount of \$150,000 which will be amortized to interest expense over the expected six month life of the debt. The residual amount of debt discount of \$16,501 in excess of the principal of \$150,000 is charged to other expense on the condensed consolidated statement of operations.

On March 27, 2015, we signed a convertible debenture in the amount of \$52,500. The Company received \$50,000 net of \$2,500 in fees. An interest charge of 4% per annum will be applied to the principal balance. The lender has the right, at any time after 180 days from the issue date to convert any or part of the outstanding and unpaid principal and interest into shares of the Company's common stock at a price of 65% of the average of the three lowest prices of the Company's shares during the 15 day period prior to conversion subject to adjustments for stock splits, stock dividends or rights offerings. The Company shall have the right to prepay the debenture for a payment of the outstanding principal plus unpaid interest at any time on or before six months after the effective date. If the Company chooses to prepay it will incur pre-payment penalties ranging from 19% to 38% of the principal balance. The Company is required to reserve at least 873,000 shares of common stock for full conversion of this debenture. The maturity date is six months after the effective date of the payment. The Company determined that the conversion feature met the definition of a liability in accordance with ASC 815-40 and therefore bifurcated the conversion feature and account for it as a derivative liability. The fair value of the conversion feature was accounted for as a note discount and will be amortized to interest expense over the life of the loan. The fair value of the conversion feature was \$46,538 at March 31, 2015 and reflected in the conversion option liability line in the condensed consolidated balance sheet.

The proceeds from the convertible debt issued on March 27, 2015 were allocated between the host debt instrument and the convertible option based on the residual method. The estimated fair value of the convertible option was determined using a binomial formula, resulting in an allocation of \$57,502 to the convertible option and accounted for as a liability in the Company's condensed consolidated balance sheet. In accordance with the provisions of ASC 815-40, the gross proceeds of \$52,500 is offset by a debt discount of \$52,500 which will be amortized to interest expense over the expected six month life of the debt. The residual amount of debt discount of \$7,502 in excess of the principal of \$52,500 is charged to other expense on the condensed consolidated statement of operations.

On March 27, 2015, we signed a convertible debenture in the amount of \$100,000. The Company received \$92,000 net of \$8,000 in fees. An interest charge of 8% per annum will be applied to the principal balance. The lender has the right, at any time after 180 days from the issue date to convert any or part of the outstanding and unpaid principal and interest into shares of the Company's common stock at a price of 65% of the average of the three lowest prices of the Company's shares during the 15 day period prior to conversion subject to adjustments for stock splits, stock dividends or rights offerings. The Company shall have the right to prepay the debenture for a payment of the outstanding principal plus unpaid interest at any time on or before six months after the effective date. If the Company chooses to prepay it will incur prepayment penalties ranging from 19% to 38% of the principal balance. The Company is required to reserve at least 5,000,000 shares of common stock for full conversion of this debenture. The maturity date is twelve months after the effective date of the payment. The Company determined that the conversion feature met the definition of a liability in accordance with ASC 815-40 and therefore bifurcated the conversion feature and account for it as a derivative liability. The fair value of the conversion feature was accounted for as a note discount and will be amortized to interest expense over the life of the loan. The fair value of the conversion feature was \$135,055 at March 31, 2015 and reflected in the conversion option liability line in the condensed consolidated balance sheet.

The proceeds from the convertible debt issued on March 27, 2015 were allocated between the host debt instrument and the convertible option based on the residual method. The estimated fair value of the convertible option was determined using a binomial formula, resulting in an allocation of \$154,359 to the convertible option and accounted for as a liability in the Company's condensed consolidated balance sheet. In accordance with the provisions of ASC 815-40, the gross proceeds of \$100,000 is offset by a debt discount of \$100,000 which will be amortized to interest expense over the expected six month life of the debt. The residual amount of debt discount of \$62,359 in excess of the principal of \$100,000 is charged to other expense on the condensed consolidated statement of operations.

#### *Other Notes*

On January 15, 2015 we signed a Merchant Agreement with a lender. Under the agreement we received \$150,000 in exchange for rights to all customer receipts until the lender is paid \$187,500, to be collected at the rate of \$744 per business day. The payments are secured by essentially all tangible assets of the Company. \$67,925 of the proceeds were used to pay off the outstanding balance of a previous loan from this lender. The Company paid \$1,875 in fees in connection with this loan. The outstanding balance was recorded as other debt on the balance sheet.

On January 29, 2015 we signed a Merchant Agreement with a lender. Under the agreement we received \$200,000 in exchange for rights to all customer receipts until the lender is paid \$278,000, to be collected at the rate of \$1,985 per business day. The payments are secured by essentially all tangible assets of the Company. The Company paid \$999 in fees in connection with this loan. The outstanding balance is recorded as other debt on the balance sheet.

On March 17, 2015 we signed a Merchant Agreement with a lender. Under the agreement we received \$50,000 in exchange for rights to all customer receipts until the lender is paid \$67,450, to be collected at the rate of \$559 per business day. The payments are secured by essentially all tangible assets of the Company. The Company paid \$999 in fees in connection with this loan. The outstanding balance is recorded as other debt on the balance sheet.

During the quarter ended March 31, 2015 the Company paid off five convertible notes. The fair value of conversion options embedded in these notes was measured on the date they were paid off and any remaining value was reclassified as equity. In aggregate we reclassified a total of \$661,464 of conversion option liabilities to equity in the quarter.

5) **Stockholders' Deficit**

*Preferred Stock*

We are authorized to issue 1,000,000 shares of preferred stock with a par value of \$0.01. Of the 1,000,000 shares of preferred stock:

- 1) 20,000 shares have been designated as Series A Junior Participating Preferred Stock (“*Junior A*”)
- 2) 313,960 shares have been designated as Series A Convertible Preferred Stock (“*Series A*”)
- 3) 279,256 shares have been designated as Series B Convertible Preferred Stock (“*Series B*”)
- 4) 88,098 shares have been designated as Series C Convertible Preferred Stock (“*Series C*”)
- 5) 850 shares have been designated as Series D Convertible Preferred Stock (“*Series D*”)
- 6) 500 shares have been designated as Series E Convertible Preferred Stock (“*Series E*”)
- 7) 240,000 shares have been designated as Series G Convertible Preferred Stock (“*Series G*”)
- 8) 10,000 shares have been designated as Series H Convertible Preferred Stock (“*Series H*”)
- 9) 21 shares have been designated as Series H2 Convertible Preferred Stock (“*Series H2*”)
- 10) 6,250 shares have been designated as Series J Convertible Preferred Stock (“*Series J*”)
- 11) 15,000 shares have been designated as Series K Convertible Preferred Stock (“*Series K*”)

As of March 31, 2015, there were no shares of Junior A, and Series A, B, C and E issued and outstanding. See our Annual Report on Form 10-K for the year ended December 31, 2014 for the pertinent terms and disclosures of preferred stock.

Stock Options and Warrants

Our stockholders approved our amended 2005 Equity Incentive Plan (the “Plan”) pursuant to which an aggregate of 1,800,000 shares of our common stock were reserved for issuance upon exercise of stock options or other equity awards made under the Plan. Under the Plan, we may award stock options, shares of common stock, and other equity interests in the Company to employees, officers, directors, consultants, and advisors, and to any other persons the Board of Directors deems appropriate. As of March 31, 2015, options to acquire 1,720,750 shares were outstanding under the Plan with 79,250 shares available for future grant under the Plan.

As of March 31, 2015, options to acquire 10,000 shares are outstanding under the 1999 Non-qualified Stock Option Plan. No additional options may be granted under the 1999 Non-qualified Stock Option Plan.

On December 12, 2013 at the Company’s special meeting the shareholders approved the 2013 Equity Incentive Plan (the “2013 Plan”) pursuant to which 3,000,000 shares of our common stock were reserved for issuance upon exercise of stock options or other equity awards under the 2013 Plan. Under the Plan, we may award stock options, shares of common stock, and other equity interests in the Company to employees, officers, directors, consultants, and advisors, and to any other persons the Board of Directors deems appropriate. As of March 31, 2015 1,675,500 options have been granted under the 2013 Plan.

The following tables summarize information concerning options and warrants outstanding and exercisable:

	Stock Options		Warrants		Total Shares	Exercisable
	Shares	Weighted Average price per share	Shares	Weighted Average price per share		
Balance outstanding, January 1, 2014	<u>1,771,708</u>	\$ 0.71	<u>15,012,327</u>	\$ 0.57	<u>16,784,035</u>	16,611,528
Granted	1,675,500	0.30	8,903,000	0.38	10,578,500	
Exercised	-	-	(4,208,658)	0.25	(4,208,658)	
Expired	(10,000)	1.00	(524,468)	0.74	(534,468)	
Forfeited	(30,958)	0.71	-	-	(30,958)	
Balance outstanding, December 31, 2014	<u>3,406,250</u>	\$ 0.51	<u>19,182,201</u>	\$ 0.49	<u>22,588,451</u>	20,858,111
Granted	-	-	-	-	-	
Exercised	-	-	-	-	-	
Expired	-	-	-	-	-	
Forfeited	-	-	-	-	-	
Balance outstanding, March 31, 2015	<u>3,406,250</u>	\$ 0.51	<u>19,182,201</u>	\$ 0.49	<u>22,588,451</u>	21,315,198



Range of Exercise Prices	Options Outstanding			Options Exercisable		
	Number of Options	Weighted Average		Number of Options	Weighted Average	
		Remaining Contractual Life (Years)	Exercise Price		Remaining Contractual Life (Years)	Exercise Price
\$0.30-\$0.39	1,675,500	9.5	\$ 0.30	444,122	9.5	\$ 0.30
0.40-0.49	311,000	8.1	0.40	311,000	8.1	0.40
0.50-0.59	251,250	7.4	0.50	251,250	7.4	0.50
0.60-0.69	467,500	4.7	0.60	439,375	4.6	0.60
1.00-1.25	701,000	2.0	1.00	687,250	1.9	1.00
\$0.30-\$1.25	<u>3,406,250</u>	7.0	\$ 0.51	<u>2,132,997</u>	5.6	\$ 0.63

As of March 31, 2015, the total estimated fair value of unvested stock options to be amortized over their remaining vesting period was \$224,672. The non-cash, stock-based compensation expense associated with the vesting of these options is expected to be \$81,988 for the remainder of 2015, \$83,440 in 2016 and \$59,244 in 2017.

#### Common Stock Issuances

On January 14, 2015, a lender, with the prior approval of the Company, chose to convert \$25,000 of their outstanding note balance into 100,000 shares of the Company's common stock. On February 25, 2015 the same lender, with the prior approval of the Company, chose to convert \$38,000 of their outstanding note balance into 140,741 shares of the Company's common stock. The note was extended to February 28, 2015 and subsequently to April 15, 2015. Each extension required a fee of \$13,000.

On February 18, 2015, March 18, 2015 and March 31, 2015, a lender, with the prior approval of the Company, chose to convert \$25,000, \$22,500 and \$27,500 of their outstanding note balance into 100,000, 90,000 and 110,000, shares, respectively, of the Company's common stock. The maturity date of the note was extended to May 19, 2015 for an extension fee of \$10,000.

#### 6) Subsequent Events

We performed a review of events subsequent to the balance sheet date through the date the financial statements were issued and determined, except as disclosed herein, that there were no other such events requiring recognition or disclosure in the financial statements.

- On April 9, 2015 we issued 35,000 common shares to a lender in payment of fees associated with a convertible note
- On April 9, 2015 we issued 250,000 common shares to an investment relations firm for future activities
- On April 17, 2015 we issued 140,000 common shares to a lender for the conversion of \$35,000 of outstanding convertible debt
- On April 21, 2015 we signed a convertible note for \$81,250
- On April 21, 2015 we signed a convertible note for \$250,000
- On April 25, 2015 we signed a convertible note for \$50,000
- On May 12, 2015 we signed a convertible note for \$107,763

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

### CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act") and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). In some cases, forward-looking statements are identified by terms such as "may," "will," "should," "could," "would," "expects," "plans," "anticipates," "believes," "estimates," "projects," "predicts," "potential" and similar expressions intended to identify forward-looking statements. Such statements include, without limitation, statements regarding:

- our need for, and our ability to raise, additional equity or debt financing on acceptable terms, if at all;
- our need to take additional cost reduction measures, cease operations or sell our operating assets, if we are unable to obtain sufficient additional financing;
- our belief that we have sufficient liquidity to finance normal operations;
- the options we may pursue in light of our financial condition;
- the amount of cash necessary to operate our business;
- the anticipated uses of grant revenue and the potential for increased grant revenue in future periods;
- our plans and expectations with respect to our continued operations;
- our belief that PCT has achieved initial market acceptance in the mass spectrometry and other markets;
- the expected increase in the number of pressure cycling technology ("*PCT*") and constant pressure ("*CP*") based units installed and the increase in revenues from the sale of consumable products and extended service contracts;
- the expected development and success of new instrument and consumables product offerings;
- the potential applications for our instrument and consumables product offerings;
- the expected expenses of, and benefits and results from, our research and development efforts;
- the expected benefits and results from our collaboration programs, strategic alliances and joint ventures;
- our expectation of obtaining additional research grants from the government in the future;
- our expectations of the results of our development activities funded by government research grants;
- the potential size of the market for biological sample preparation;
- general economic conditions;
- the anticipated future financial performance and business operations of our company;
- our reasons for focusing our resources in the market for genomic, proteomic, lipidomic and small molecule sample preparation;
- the importance of mass spectrometry as a laboratory tool;
- the advantages of PCT over other current technologies as a method of biological sample preparation in biomarker discovery, forensics, and histology and for other applications;
- the capabilities and benefits of our PCT sample preparation system, consumables and other products;
- our belief that laboratory scientists will achieve results comparable with those reported to date by certain research scientists who have published or presented publicly on PCT and our other products;
- our ability to retain our core group of scientific, administrative and sales personnel; and
- our ability to expand our customer base in sample preparation and for other applications of PCT and our other products.

These forward-looking statements are only predictions and involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements, expressed or implied, by such forward-looking statements. Also, these forward-looking statements represent our estimates and assumptions only as of the date of this Quarterly Report on Form 10-Q. Except as otherwise required by law, we expressly disclaim any obligation or undertaking to release publicly any updates or revisions to any forward-looking statement contained in this Quarterly Report on Form 10-Q to reflect any change in our expectations or any change in events, conditions or circumstances on which any of our forward-looking statements are based. Factors that could cause or contribute to differences in our future financial and other results include those discussed in the risk factors set forth in Part I, Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2014. We qualify all of our forward-looking statements by these cautionary statements.

## OVERVIEW

We are focused on solving the challenging problems inherent in biological sample preparation, a crucial laboratory step performed by scientists worldwide working in biological life sciences research. Sample preparation is a term that refers to a wide range of activities that precede most forms of scientific analysis. Sample preparation is often complex, time-consuming and, in our belief, one of the most error-prone steps of scientific research. It is a widely-used laboratory undertaking – the requirements of which drive what we believe is a large and growing worldwide market. We have developed and patented a novel, enabling technology platform that can control the sample preparation process. It is based on harnessing the unique properties of high hydrostatic pressure. This process, called pressure cycling technology, or PCT, uses alternating cycles of hydrostatic pressure between ambient and ultra-high levels i.e., 35,000 pounds per square inch (“*psi*”) or greater to safely, conveniently and reproducibly control the actions of molecules in biological samples, such as cells and tissues from human, animal, plant and microbial sources.

Our pressure cycling technology uses internally developed instrumentation that is capable of cycling pressure between ambient and ultra-high levels at controlled temperatures and specific time intervals, to rapidly and repeatedly control the interactions of bio-molecules, such as deoxyribonucleic acid (“*DNA*”), ribonucleic acid (“*RNA*”), proteins, lipids and small molecules. Our laboratory instrument, the Barocycler®, and our internally developed consumables product line, which include our Pressure Used to Lyse Samples for Extraction (“*PULSE*”) tubes, and other processing tubes, and application specific kits such as consumable products and reagents, together make up our PCT Sample Preparation System (“*PCT SPS*”).

We have experienced negative cash flows from operations with respect to our pressure cycling technology business since our inception. As of March 31, 2015, we did not have adequate working capital resources to satisfy our current liabilities and as a result we have substantial doubt about our ability to continue as a going concern. We have been successful in raising cash through debt and equity offerings in the past and as described in Note 6, completed debt financing subsequent to March 31, 2015. We have financing efforts in place to continue to raise cash through debt and equity offerings.

We need substantial additional capital to fund normal operations in future periods. If we are able to obtain additional capital or otherwise increase our revenues, we may increase spending in specific research and development applications and engineering projects and may hire additional sales personnel or invest in targeted marketing programs. In the event that we are unable to obtain financing on acceptable terms, or at all, we will likely be required to cease our operations, pursue a plan to sell our operating assets, or otherwise modify our business strategy, which could materially harm our future business prospects.

We hold 14 United States and 10 foreign patents covering multiple applications of PCT in the life sciences field. Our pressure cycling technology employs a unique approach that we believe has the potential for broad use in a number of established and emerging life sciences areas, including:

- sample preparation for genomic, proteomic, and small molecule studies;
- pathogen inactivation;
- protein purification;
- control of chemical (particularly enzymatic) reactions; and
- Immunodiagnosics (clinical laboratory testing).

We reported a number of accomplishments in the first four months of 2015:

- **April 14**, the Company announced a collaboration agreement with Southern University at New Orleans for improving and extending applications of the PCT platform for DNA detection in forensic samples.
- **March 31**, the Company announced FY 2014 financial results, including an almost 30% increase in products and services revenue compared to FY 2013.
- **February 19**, the Company announced the award of a \$1 million NIH SBIR Phase II Grant to develop a high-throughput, high pressure-based DNA Shearing System for Next Generation Sequencing (“*NGS*”) applications.
- **February 10**, the Company received the first Purchase Order for its Barozyme HT48 High-Throughput System.
- **January 21**, the Company announced it had received over \$1.16 million during the past two months from equity investments, and that it planned to expand its marketing, sales, and operations capabilities.

## Results of Operations

### *Comparison for the three months ended March 31, 2015 and 2014*

#### *Revenue*

We recognized total revenue of \$440,134 for the three months ended March 31, 2015 as compared to \$404,147 during the three months ended March 31, 2014, an increase of \$35,987 or 9%. This increase is attributable to an increase in grant revenue in 2015 partially offset by a reduction in products and service revenue as detailed below.

*Products, Services, Other.* Revenue from the sale of products and services decreased 11% to \$359,364 for the three months ended March 31, 2015 as compared to \$404,147 during the three months ended March 31, 2014. Sales of consumables for the three months ended March 31, 2015 were \$39,835 compared to \$54,612 during the same period in the prior year.

*Grant Revenue.* During the three months ended March 31, 2015, we recorded grant revenue of \$80,770 compared to no grant revenues in the comparable period in 2014. Our previous grants were completed in September of 2013 and we did not receive a new grant until December of 2014. The new grant was for approximately \$1,000,000 to run over a period of two years.

#### *Cost of Products and Services*

The cost of products and services was \$190,783 for the three months ended March 31, 2015 compared to \$177,606 for the comparable period in 2014. Our gross profit margin on products and services was 47% for the three months ended March 31, 2015, as compared to 56% for the prior period. The lower gross margin in 2015 was attributable to two significant sales made through our distributor.

#### *Research and Development*

Research and development expenditures were \$231,923 during the three months ended March 31, 2015 as compared to an almost identical amount of \$231,088 in the same period in 2014. Our work on research and development projects remained steady during both periods while we continued to control spending without sacrificing output.

Research and development expense recognized in the three months ended March 31, 2015 and 2014 included \$11,343 and \$7,553 of non-cash, stock-based compensation expense, respectively.

#### *Selling and Marketing*

Selling and marketing expenses decreased to \$166,223 for the three months ended March 31, 2015 from \$170,655 for the comparable period in 2014, a decrease of \$4,432 or 3%. This decrease is primarily attributed to control of sales and marketing salaries somewhat offset by expenses incurred to attend trade shows in order to introduce new products.

During the three months ended March 31, 2015 and 2014, selling and marketing expense included \$6,975 and \$5,991 of non-cash, stock-based compensation expense, respectively.

#### *General and Administrative*

General and administrative costs totaled \$726,024 for the three months ended March 31, 2015 as compared to \$606,479 for the comparable period in 2014, an increase of \$119,545 or 20%. The increase is primarily related to increases in investor relations expense offset by a reduction in travel related expenses.

During the three months ended March 31, 2015 and 2014, general and administrative expense included \$36,572 and \$5,352 of non-cash, stock-based compensation expense, respectively.

#### *Operating Loss*

Our operating loss was \$874,819 for the three months ended March 31, 2015 as compared to \$782,366 for the comparable period in 2014, an increase of \$92,453 or 12%. Although our overall revenue was up from the same quarter in the previous year we were not able to offset the lower margin in products revenue and increased general and administrative costs.

## *Other Income (Expense), Net*

### *Interest (Expense) Income*

Interest expense totaled \$605,585 for the three months ended March 31, 2015 as compared to interest expense of \$244,612 for the three months ended March 31, 2014. We recorded \$405,848 of amortized debt discount and \$130,760 of prepayment penalties for the three months ended March 31, 2015 related to a series of convertible and other notes.

### *Change in fair value of warrant derivative liability*

During the three months ended March 31, 2015, we recorded non-cash expense of \$51,031 for warrant revaluation in our consolidated statements of operations due to an increase in the fair value of the warrant liability related to warrants issued in our Series D private placement. This increase in fair value was primarily due to the increase in price of the Company's common stock at March 31, 2015 as compared to the price on December 31, 2014. The components for determining the fair value of the warrants are contained in the table in Note 3 of the accompanying condensed consolidated financial statements.

### *Change in fair value of conversion option liability*

During the three months ended March 31, 2015, we recorded a non-cash expense of \$170,774 for conversion option revaluation expense in our condensed consolidated statements of operations due to an increase in the fair value of the conversion option liability related to convertible debt. This increase in fair value was primarily due to the increase in price of the Company's common stock on March 31, 2015 as compared to the price on December 31, 2014 or the date the debt was incurred during the quarter. The components for determining the fair value of the conversion option liabilities are contained in the table in Note 3 of the accompanying condensed consolidated financial statements.

### *Other Expense*

During the three months ended March 31, 2015 we also recorded a non-cash expense of \$308,328 upon issuance of convertible debt to account for the excess of fair value of the conversion option liability embedded in the debt instruments over the amount of the debt incurred. The components for determining the fair value of the warrant liability and can be found in Note 3 of these condensed consolidated financial statements.

## *Net Loss Applicable to Common Shareholders*

During the three months ended March 31, 2015, we recorded a net loss to common shareholders of \$2,064,123 or \$(0.11) per share, as compared to a net loss to common shareholders of \$3,084,708 or \$(0.25) per share in the three months ended March 31, 2014. Net loss to common shareholders in the previous year included a \$1,280,066 charge for a beneficial conversion feature which we did not have in 2015. Net loss per share decreased by \$0.14 due to the lower net loss to common shareholders and an increase in the weighted average common shares outstanding. The weighted average common shares outstanding for the period increased primarily because of the issuance of shares of common stock upon conversion of Convertible Preferred Stock subsequent to March 31, 2014 and common stock issued in our warrant reset transaction in December 2014. See Note 3 of the Notes to Consolidated Condensed Financial Statements under the "Computation of Loss per Share" heading.

## ***Liquidity and Financial Condition***

We have experienced negative cash flows from operations with respect to our pressure cycling technology business since our inception. As of March 31, 2015, we did not have adequate working capital resources to satisfy our current liabilities and as a result, we have substantial doubt regarding our ability to continue as a going concern. We have been successful in raising cash through debt and equity offerings in the past and as described in Note 6, completed debt-financing subsequent to March 31, 2015. We have efforts in place to continue to raise cash through debt and equity offerings.

We will need substantial additional capital to fund our operations in future periods. In the event that we are unable to obtain financing on acceptable terms, or at all, we will likely be required to cease our operations, pursue a plan to sell our operating assets, or otherwise modify our business strategy, which could materially harm our future business prospects.

Net cash used in operations for the three months ended March 31, 2015 was \$1,050,482 as compared to \$1,103,916 for the three months ended March 31, 2014. The cash used in operations in 2015 and 2014 is principally due to the loss from operations and a decrease in accounts payable.

Cash used in investing activities for the three months ended March 31, 2015 and 2014 was not significant.

Net cash provided by financing activities for the three months ended March 31, 2015 was \$796,844 as compared to \$1,506,132 for the same period in the prior year. The cash from financing activities in the period ending March 31, 2015 includes \$1,054,750 from convertible debt, net of fees and original note discounts, less convertible debt payments of \$500,500. We also received \$396,127 from non-convertible debt, net of fees, less payments on non-convertible debt of \$147,534. In the prior year we received \$270,000 from convertible debt and \$1,456,360 in proceeds from the second and third tranches of our Series K Convertible Preferred Stock offering.

### ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

NOT APPLICABLE

### ITEM 4. CONTROLS AND PROCEDURES

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our Securities Exchange Act of 1934 filings are recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our President and Chief Executive Officer (Principal Executive Officer) and Chief Financial Officer (Principal Financial Officer), as appropriate, to allow timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognized that controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, as ours are designed to do, and management was necessarily required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

As of March 31, 2015, we carried out an evaluation, under the supervision and with the participation of our management, including our Principal Executive Officer and Principal Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures, as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934. Based upon that evaluation, our Principal Executive Officer and Principal Financial Officer concluded that our disclosure controls and procedures were not effective.

Our conclusion that our disclosure controls and procedures were not effective as of March 31, 2015 is due to our continued limited resources for adequate personnel to prepare and file reports under the Securities Exchange Act of 1934 within the required periods and the continued presence of the material weaknesses in our internal control over financial reporting identified in our Annual Report on Form 10-K for the year ended December 31, 2014. These material weaknesses are the following:

- A lack of sufficient segregation of duties. Specifically, this material weakness is such that the design over these areas relies primarily on detective controls and could be strengthened by adding preventative controls to properly safeguard company assets.
- A lack of sufficient personnel in the accounting function due to our limited resources with appropriate skills, training and experience to perform the review processes to ensure the complete and proper application of generally accepted accounting principles, particularly as it relates to valuation of warrants and other complex debt /equity transactions. Specifically, this material weakness led to segregation of duties issues and resulted in audit adjustments to the annual consolidated financial statements and revisions to related disclosures, valuation of warrants and other equity transactions.

We continue to plan to remediate those material weaknesses as follows:

- Improve the effectiveness of the accounting group by continuing to augment our existing resources with additional consultants or employees to improve segregation procedures and to assist in the analysis and recording of complex accounting transactions. We plan to hire additional senior accounting personnel or additional independent consultants once we generate significantly more revenue or raise significant additional working capital.
- Improve segregation procedures by strengthening cross approval of various functions including quarterly internal audit procedures where appropriate.

During the period covered by this Report, we implemented and performed additional substantive procedures, such as supervisory review of work papers and consistent use of financial models used in equity valuations, to ensure our condensed consolidated financial statements as of and for the three month period ended March 31, 2015, are fairly stated in all material respects in accordance with GAAP. We have not, however, been able to fully remediate the material weaknesses due to our limited financial resources. Our remediation efforts are largely dependent upon our securing additional financing to cover the costs of implementing the changes required. If we are unsuccessful in securing such funds, remediation efforts may be adversely affected in a material manner.

Except as described above, there have been no changes in our internal controls over financial reporting that occurred during the period ended March 31, 2015 that have materially affected, or are reasonably likely to materially affect, our internal controls over financial reporting.

## **PART II. OTHER INFORMATION**

### **Item 1. Legal Proceedings.**

We are not currently involved in any litigation that we believe could have a material adverse effect on our financial condition or results of operations. There is no action, suit, proceeding, inquiry or investigation before or by any court, public board, government agency, self-regulatory organization or body pending or, to the knowledge of the executive officers of our company or any of our subsidiaries, threatened against or affecting our company, our common stock, any of our subsidiaries or of our companies or our subsidiaries' officers or directors in their capacities as such, in which an adverse decision could have a material adverse effect.

### **Item 1A. Risk Factors**

Factors that could cause or contribute to differences in our future financial and operating results include those discussed in the risk factors set forth in Item 1 of our Annual Report on Form 10-K for the year ended December 31, 2014. The risks described in our Form 10-K and this Report are not the only risks that we face. Additional risks not presently known to us or that we do not currently consider significant may also have an adverse effect on us. If any of the risks actually occur, our business, results of operations, cash flows or financial condition could suffer.

There have been no material changes to the risk factors set forth in Item 1 of our Annual Report on Form 10-K for the year ended December 31, 2014.

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

None.

### **Item 3. Defaults Upon Senior Securities**

None

### **Item 4. Mine Safety Disclosures**

Not applicable

### **Item 5. Other Information**

None



## Item 6. Exhibits

### Exhibits

- 31.1 Principal Executive Officer Certification Pursuant to Item 601(b)(31) of Regulation S-K, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
- 31.2 Principal Financial Officer Certification Pursuant to Item 601(b)(31) of Regulation S-K, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
- 32.1\* Principal Executive Officer Certification Pursuant to Item 601(b)(32) of Regulation S-K, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
- 32.2\* Principal Financial Officer Certification Pursuant to Item 601(b)(32) of Regulation S-K, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
- 101.INS XBRL Instance Document †
- 101.SCH XBRL Taxonomy Extension Schema Document †
- 101.CAL XBRL Taxonomy Extension Calculation Linkbase Document †
- 101.DEF XBRL Taxonomy Extension Definition Linkbase Document †
- 101.LAB XBRL Taxonomy Extension Label Linkbase Document †
- 101.PRE XBRL Taxonomy Extension Presentation Linkbase Document †

\* In accordance with SEC Release 33-8238, Exhibits 32.1 and 32.2 are furnished and not filed.

† Furnished herewith. XBRL (eXtensible Business Reporting Language) information is furnished and not filed or a part of a registration statement or prospectus for purposes of Sections 11 or 12 of the Securities Act of 1933, as amended, is deemed not filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and otherwise is not subject to liability under these sections.

**SIGNATURES**

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

**PRESSURE BIOSCIENCES, INC.**

Date :May 15, 2015

By: /s/Richard T. Schumacher  
Richard T. Schumacher  
President & Chief Executive Officer  
(Principal Executive Officer)

**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.

**PRESSURE BIOSCIENCES, INC.**

Date: May 15, 2015

By: /s/Richard P. Thomley  
Richard P. Thomley  
Chief Financial Officer  
(Principal Financial Officer)

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

I, Richard T. Schumacher, certify that:

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

Dated: May 15, 2015

*/s/ Richard T. Schumacher*  
Richard T. Schumacher  
President & Chief Executive Officer  
(Principal Executive Officer)

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

I, Richard P. Thomley, certify that:

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

Dated: May 15, 2015

*/s/ Richard P. Thomley*  
Richard P. Thomley  
Chief Financial Officer  
(Principal Financial Officer)

**Certification**  
**Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**  
**(Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code)**

In connection with the Quarterly Report on Form 10-Q of Pressure BioSciences, Inc., a Massachusetts corporation (the "Company") for the period ended March 31, 2015 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Richard T. Schumacher, President and Chief Executive Officer of the Company, do hereby certify, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code) that:

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

Date: May 15, 2015

By: /s/Richard T. Schumacher  
Richard T. Schumacher  
President & Chief Executive Officer  
(Principal Executive Officer)

A signed original of this written statement required by Section 906 has been provided to Pressure BioSciences, Inc. and will be retained by Pressure BioSciences, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

**Certification**  
**Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**  
**(Subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code)**

In connection with the Quarterly Report on Form 10-Q of Pressure BioSciences, Inc., a Massachusetts corporation (the "Company") for the period ended March 31, 2015 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Richard P. Thomley, Chief Financial Officer of the Company, do hereby certify, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code) that:

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

Date: May 15, 2015

By: /s/Richard P. Thomley  
Richard P. Thomley  
Chief Financial Officer  
(Principal Financial Officer)

A signed original of this written statement required by Section 906 has been provided to Pressure BioSciences, Inc. and will be retained by Pressure BioSciences, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.