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 June 30, 2021

or

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

For the transition period from _____________ to _____________

Commission File Number 001-38185

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

Massachusetts	**04-2652826**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
14 Norfolk Avenue **South Easton**, Massachusetts	**02375**
(Address of principal executive offices)	(Zip Code)

(508) 230-1828
(Registrant's telephone number, including area code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
N/A	N/A	N/A

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 every Interactive Data File required to be submitted 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 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," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated Filer	☒	Smaller Reporting Company	☒
Emerging Growth Company	☐		

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

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 August 11, 2021 was 6,371,190.

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PART I - FINANCIAL INFORMATION

Item 1. Financial Statements

PRESSURE BIOSCIENCES, INC. AND SUBSIDIARY
CONSOLIDATED BALANCE SHEETS
(UNAUDITED)

	June 30, 2021	December 31, 2020
ASSETS		
CURRENT ASSETS		
Cash and cash equivalents	$ 46,625	$ 18,540
Accounts receivable	629,766	131,228
Inventories, net of $342,496 reserve at June 30, 2021 and December 31, 2020	492,095	592,767
Prepaid expenses and other current assets	219,161	314,936
Total current assets	1,387,647	1,057,471
Investment in equity securities	274,621	517,001
Property and equipment, net	7,431	16,490
Right of use asset leases	189,808	221,432
Intangible assets, net	447,115	490,385
TOTAL ASSETS	$ 2,306,622	$ 2,302,779
LIABILITIES AND STOCKHOLDERS' DEFICIT		
CURRENT LIABILITIES		
Accounts payable	$ 628,835	$ 771,945
Accrued employee compensation	420,510	417,578
Accrued professional fees and other	2,163,563	2,037,806
Other current liabilities	8,165,281	6,330,722
Deferred revenue	49,189	47,328
Convertible debt, net of unamortized discounts of $2,353,152 and $3,948,167, respectively	10,909,314	7,545,670
Other debt, net of unamortized discounts of $5,495 and $0, respectively	1,363,931	1,135,469
Operating lease liability	69,204	65,193
Other related party debt	184,600	166,000
Total current liabilities	23,954,427	18,517,711
LONG TERM LIABILITIES		
Long term debt	527,038	527,039
Operating lease liability – long term	120,604	156,239
Deferred revenue	7,446	19,382
TOTAL LIABILITIES	24,609,515	19,220,371
COMMITMENTS AND CONTINGENCIES (Note 4)		
STOCKHOLDERS' DEFICIT		
Series D Convertible Preferred Stock, $.01 par value; 850 shares authorized; 300 shares issued and outstanding on June 30, 2021 and December 31, 2020, respectively (Liquidation value of $300,000)	3	3
Series G Convertible Preferred Stock, $.01 par value; 240,000 shares authorized; 80,570 shares issued and outstanding on June 30, 2021 and December 31, 2020, respectively	806	806
Series H Convertible Preferred Stock, $.01 par value; 10,000 shares authorized; 10,000 shares issued and outstanding on June 30, 2021 and December 31, 2020, respectively	100	100
Series H2 Convertible Preferred Stock, $.01 par value; 21 shares authorized; 21 shares issued and outstanding on June 30, 2021 and December 31, 2020, respectively	-	-
Series J Convertible Preferred Stock, $.01 par value; 6,250 shares authorized; 3,458 shares issued and outstanding on June 30, 2021 and December 31, 2020, respectively	35	35
Series K Convertible Preferred Stock, $.01 par value; 15,000 shares authorized; 6,880 shares issued and outstanding on June 30, 2021 and December 31, 2020, respectively	68	68
Series AA Convertible Preferred Stock, $.01 par value; 10,000 shares authorized; 8,083 and 8,043 shares issued and outstanding on June 30, 2021 and December 31, 2020, respectively	81	81
Common stock, $.01 par value; 100,000,000 shares authorized; 6,260,884 and 4,168,324 shares issued and outstanding on June 30, 2021 and December 31, 2020 respectively	62,608	41,683
Warrants to acquire common stock	30,911,495	29,192,471
Additional paid-in capital	55,317,862	50,312,968
Accumulated deficit	(108,595,951)	(96,465,807)
Total stockholders' deficit	(22,302,893)	(16,917,592)
TOTAL LIABILITIES AND STOCKHOLDERS' DEFICIT	$ 2,306,622	$ 2,302,779

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

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

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
	2021	2020	2021	2020
Revenue:				
Products, services, other	$ 608,927	$ 268,154	$ 1,168,801	$ 522,027
Total revenue	608,927	268,154	1,168,801	522,027
Costs and expenses:				
Cost of products and services	286,660	134,882	512,935	310,028
Research and development	256,507	294,602	556,450	560,292
Selling and marketing	92,813	162,098	186,141	351,214
General and administrative	619,286	1,007,215	1,634,716	2,026,225
Total operating costs and expenses	1,255,266	1,598,797	2,890,242	3,247,759
Operating loss	(646,339)	(1,330,643)	(1,721,441)	(2,725,732)
Other (expense) income:				
Interest expense, net	(3,526,141)	(1,724,879)	(8,194,205)	(3,296,679)
Unrealized (loss) gain on investment in equity securities	(134,477)	196,891	(242,380)	346,262
Loss on extinguishment of liabilities	(498,226)	(1,710,151)	(1,223,385)	(2,846,518)
Other income	60,012	-	58,653	-
Total other expense	(4,098,832)	(3,238,139)	(9,601,317)	(5,796,935)
Net loss	(4,745,171)	(4,568,782)	(11,322,758)	(8,522,667)
Deemed dividends on beneficial conversion feature	-	-	(57,884)	-
Preferred stock dividends	(404,171)	(396,970)	(807,386)	(721,556)
Net loss attributable to common stockholders	$ (5,149,342)	$ (4,965,752)	$ (12,188,028)	$ (9,244,223)
Basic and diluted net loss per share attributable to common stockholders	$ (0.90)	$ (1.70)	$ (2.29)	$ (3.34)
Weighted average common stock shares outstanding used in the basic and diluted net loss per share calculation	5,748,711	2,914,659	5,312,172	2,765,132

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

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

	For the Six Months Ended June 30,	
	2021	2020
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$ (11,322,758)	$ (8,522,667)
Adjustments to reconcile net loss to net cash used in operating activities:		
Gain on loan forgiveness	(367,039)	-
Non-cash lease expense	31,624	35,927
Common stock and warrants issued for interest and extension fees	4,054,749	159,784
Depreciation and amortization	56,291	74,247
Accretion of interest and amortization of debt discount	3,909,024	1,750,911
Loss on extinguishment of accrued liabilities and debt	-	977,622
Stock-based compensation expense	124,695	307,110
Loss (Gain) on investment in equity securities	242,380	(346,262)
Common stock issued for services	238,512	87,963
Changes in operating assets and liabilities:		
Accounts receivable	(498,538)	108,096
Inventories	100,672	2,853
Prepaid expenses and other assets	95,775	20,944
Accounts payable	(143,110)	(5,927)
Accrued employee compensation	2,932	(58,775)
Operating lease liability	(31,624)	(35,927)
Deferred revenue and other accrued expenses	1,415,688	2,643,607
Net cash used in operating activities	(2,090,727)	(2,800,494)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Advance on loan receivable	-	(531,250)
Purchases of property plant and equipment	(3,962)	(1,663)
Net cash used in investing activities	(3,962)	(532,913)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Net proceeds from Series AA Convertible Preferred Stock	100,000	-
Proceeds from stock option exercises	14,773	-
Net proceeds from convertible debt	2,598,250	4,422,600
Net proceeds from non-convertible debt – third party	1,183,188	990,539
Net proceeds from non-convertible debt – related party	171,600	8,500
Payments on convertible debt	(1,200,996)	(1,257,250)
Payments on non-convertible debt – related party	(153,000)	-
Payments on non-convertible debt	(591,041)	(819,149)
Net cash provided by financing activities	2,122,774	3,345,240
NET INCREASE IN CASH AND CASH EQUIVALENTS	28,085	11,833
CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR	18,540	29,625
CASH AND CASH EQUIVALENTS AT END OF PERIOD	$ 46,625	$ 41,458
SUPPLEMENTAL INFORMATION		
Interest paid in cash	$ 383,403	$ 419,817
NON CASH TRANSACTIONS:		
Interest added to principal	-	152,552
Common stock issued to settle accrued liabilities	-	127,855
Common stock issued with debt	112,877	-
Discount from warrants issued with debt	1,068,842	2,958,693
Common stock issued in lieu of cash for dividend	114,298	176,748
Preferred stock dividends	807,386	721,556
Conversion of debt and interest into common stock	349,250	1,317,649
Discount due to beneficial conversion feature	566,847	982,097
Deemed dividend - beneficial conversion feature	57,884	-

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

PRESSURE BIOSCIENCES, INC.
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' DEFICIT
(UNAUDITED)

	Series D Preferred Stock		Series G Preferred Stock		Series H Preferred Stock		Series H(2) Preferred Stock		Series J Preferred Stock		Series K Preferred Stock		Series AA Preferred Stock		Common Stock		Stock	Additional Paid-In	Accumulated	Total Stockholders'
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Warrants	Capital	Deficit	Deficit
BALANCE, December 31, 2019	300	$ 3	80,570	$ 806	10,000	$ 100	21	$ -	3,458	$ 35	6,880	$ 68	7,939	$ 80	2,549,620	$ 25,496	$ 22,599,177	$ 44,261,105	$ (78,942,277)	$ (12,055,407)
Stock-based compensation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	241,769	-	241,769
Series AA Preferred Stock dividend	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(324,586)	(324,586)
Issuance of common stock to settle accrued liabilities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	66,500	665	-	127,190	-	127,855
Common stock issued for debt settlement	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10,000	100	-	24,900	-	25,000
Issuance of common stock for debt extension and interest paid in kind	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38,521	385	-	60,175	-	60,560
Beneficial conversion feature on debt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	404,608	-	404,608
Warrants issued with debt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,205,010	-	-	1,205,010
Warrants issued for debt extension	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	609,143	-	-	609,143
Net loss	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(3,953,885)	(3,953,885)
BALANCE, March 31, 2020	300	$ 3	80,570	$ 806	10,000	$ 100	21	-	3,458	$ 35	6,880	$ 68	7,939	$ 80	2,664,641	$ 26,646	24,413,330	45,119,747	(83,220,748)	(13,659,933)
Stock-based compensation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	65,341	-	65,341
Series AA Preferred Stock dividend	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(396,970)	(396,970)
Issuance of common stock for services	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25,000	250	-	87,713	-	87,963
Issuance of common stock for interest paid-in-kind	-	-	-	-	-	-	-	-	-	-	-	-	-	-	42,510	425	-	98,799	-	99,224
Beneficial conversion feature on debt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	577,489	-	577,489
Warrants issued with debt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,753,683	-	-	1,753,683
Warrants issued for debt extension	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	360,602	-	-	360,602
Issuance of Common Stock for Dividends Paid-in-kind	-	-	-	-	-	-	-	-	-	-	-	-	-	-	64,388	644	-	176,104	-	176,748
Conversion of debt and interest for Common Stock	-	-	-	-	-	-	-	-	-	-	-	-	-	-	410,746	4,107	-	1,288,542	-	1,292,649
Net loss	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(4,568,782)	(4,568,782)
BALANCE, June 30, 2020	300	$ 3	80,570	$ 806	10,000	$ 100	21	$ -	3,458	$ 35	6,880	$ 68	7,939	$ 80	3,207,285	$ 32,072	$ 26,527,615	$ 47,413,735	$ (88,186,500)	$ (14,211,986)

	Series D Preferred Stock		Series G Preferred Stock		Series H Preferred Stock		Series H(2) Preferred Stock		Series J Preferred Stock		Series K Preferred Stock		Series AA Preferred Stock		Common Stock		Stock	Additional Paid-In	Accumulated	Total Stockholders’
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Warrants	Capital	Deficit	Deficit
BALANCE, December 31, 2020	300	$ 3	80,570	$ 806	10,000	$ 100	21	$ -	3,458	$ 35	6,880	$ 68	8,043	81	4,168,324	$ 41,683	$ 29,192,471	$ 50,312,968	$ (96,465,807)	$ (16,917,592)
Stock-based compensation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	61,237	-	61,237
Stock option exercise	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21,411	214	-	14,559	-	14,773
Series AA Preferred Stock dividend	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(403,215)	(403,215)
Issuance of warrants for interest paid-in-kind	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	600,298	-	-	600,298
Issuance of common stock for services	-	-	-	-	-	-	-	-	-	-	-	-	-	-	112,400	1,124	-	237,388	-	238,512
Beneficial conversion feature on debt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53,777	-	53,777
Series AA Preferred Stock offering	-	-	-	-	-	-	-	-	-	-	-	-	40	-	-	-	49,884	50,116	-	100,000
Beneficial conversion option on convertible preferred stock	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	57,884	-	57,884
Deemed dividend on convertible preferred stock	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(57,884)	-	(57,884)
Conversion of debt and interest for common stock	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47,200	472	-	117,528	-	118,000
Issuance of common stock for interest paid in kind	-	-	-	-	-	-	-	-	-	-	-	-	-	-	922,372	9,224	-	2,012,556	-	2,021,780
Warrants issued with debt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	162,654	-	-	162,654
Net loss	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(6,577,587)	(6,577,587)
BALANCE, March 31, 2021	300	$ 3	80,570	$ 806	10,000	$ 100	21	$ -	3,458	$ 35	6,880	$ 68	8,083	$ 81	5,271,707	$ 52,717	$ 30,005,307	$ 52,860,129	$ (103,446,609)	$ (20,527,363)
Stock-based compensation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	63,458	-	63,458
Series AA Preferred Stock dividend	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(404,171)	(404,171)
Beneficial conversion feature on debt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	513,070	-	513,070
Issuance of common stock for interest paid in kind	-	-	-	-	-	-	-	-	-	-	-	-	-	-	720,610	7,206	-	1,425,465	-	1,432,671
Issuance of common stock for dividends paid-in-kind	-	-	-	-	-	-	-	-	-	-	-	-	-	-	56,067	560	-	113,738	-	114,298
Conversion of debt and interest for common stock	-	-	-	-	-	-	-	-	-	-	-	-	-	-	92,500	925	-	230,325	-	231,250
Stock issued with debt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	120,000	1,200	-	111,677	-	112,877
Warrants issued with debt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	906,188	-	-	906,188
Net loss	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(4,745,171)	(4,745,171)
BALANCE, June 30, 2021	300	$ 3	80,570	$ 806	10,000	$ 100	21	$ -	3,458	$ 35	6,880	$ 68	8,083	$ 81	6,260,884	$ 62,608	$ 30,911,495	$ 55,317,862	$ (108,595,951)	$ (22,302,893)

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

1) Business Overview, Liquidity and Management Plans

Pressure BioSciences, Inc. ("we", "our", "the Company") develops and sells innovative, broadly enabling, pressure-based platform solutions for the worldwide life sciences industry. Our solutions are based on the unique properties of both constant (i.e., static) and alternating (i.e., pressure cycling technology, or "PCT") hydrostatic pressure. PCT is a patented enabling technology platform that uses alternating cycles of hydrostatic pressure between ambient and ultra-high levels to control bio-molecular interactions (e.g., cell lysis, biomolecule extraction) safely and reproducibly. Our primary focus has historically been in the development of PCT-based products for biomarker and target discovery, drug design and development, biotherapeutics characterization and quality control, soil & plant biology, forensics, and counter-bioterror applications. Additionally, major new market opportunities have emerged in the use of our pressure-based technology expertise in two new platform technology areas: (1) the use of our recently acquired, patented technology from BaroFold, Inc. for gently controlled disaggregation and refolding of biotherapeutic proteins (the "BaroFold" technology) to allow entry into the bio-pharma contract services sector, and (2) the use of our recently-patented, scalable, high-efficiency, pressure-based Ultra Shear Technology ("UST") platform to (i) create stable nanoemulsions of otherwise immiscible fluids (e.g., oils and water) for greatly improved cost-effectiveness, high bioavailability, safer and improved sensory experience in products spanning pharmaceuticals, nutraceuticals, cosmeceuticals, personal care products, agrochemicals, food/beverage and many industrial products and to (ii) prepare higher quality, homogenized, extended shelf-life or room temperature stable low-acid liquid foods that cannot be effectively preserved using existing non-thermal technologies.

2) Going Concern

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern, which contemplates the realization of assets and the liquidation of liabilities in the normal course of business. However, we have experienced losses from operations and negative cash flows from operations with respect to our pressure cycling technology business since our inception. As of June 30, 2021, we do 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 debt and equity capital in the past and as described in Notes 5 and 6. In addition we raised debt and equity capital after June 30, 2021 as described in Note 7. We have financing efforts in place to continue to raise cash through debt and equity offerings. 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. These financial statements do not include any adjustments that might result from this uncertainty.

3) **Summary of Significant Accounting Policies**

Basis of Presentation

The unaudited interim financial statements of Pressure BioSciences, Inc. and its consolidated subsidiaries (collectively, the "Company") included herein have been prepared by the Company in accordance with the instructions to Form 10-Q and the rules and regulations of the U.S. Securities and Exchange Commission. Under these rules and regulations, some information and footnote disclosures normally included in financial statements prepared under accounting principles generally accepted in the United States of America have been shortened or omitted. Management believes that all adjustments necessary for a fair statement of the financial position and the results of operations for the periods shown have been made. All adjustments are normal and recurring. These financial statements should be read together with the Company's audited financial statements included in its Form 10-K for the fiscal year ended December 31, 2020.

Use of Estimates

The Company's consolidated financial statements and accompanying notes are prepared in accordance with accounting principles generally accepted in the United States of America, which require the use of estimates, judgements and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the periods presented. Global concerns about the COVID-19 pandemic have adversely affected, and we expect will continue to adversely affect, our business, financial condition and results of operations including the estimates and assumptions made by management. Significant estimates and assumptions include valuations of share-based awards, investments in equity securities and intangible asset impairment. Actual results could differ from the estimates, and such differences may be material to the Company's consolidated financial statements.

Principles of Consolidation

The 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.

Revenue Recognition

We recognize revenue in accordance with FASB ASC 606, *Revenue from Contracts with Customers,* and *ASC 340-40, Other Assets and Deferred Costs—Contracts with Customers*. Revenue is measured based on a consideration specified in a contract with a customer, and excludes any sales incentives and amounts collected on behalf of third parties. We enter into sales contracts that may consist of multiple distinct performance obligations where certain performance obligations of the sales contract are not delivered in one reporting period. We measure and allocate revenue according to ASC 606-10.

We identify a performance obligation as distinct if both the following criteria are true: the customer can benefit from the good or service either on its own or together with other resources that are readily available to the customer and the entity's promise to transfer the good or service to the customer is separately identifiable from other promises in the contract. Determining the standalone selling price ("SSP") and allocation of consideration from a contract to the individual performance obligations, and the appropriate timing of revenue recognition, is the result of significant qualitative and quantitative judgments. Management considers a variety of factors such as historical sales, usage rates, costs, and expected margin, which may vary over time depending upon the unique facts and circumstances related to each performance obligation in making these estimates. While changes in the allocation of the SSP between performance obligations will not affect the amount of total revenue recognized for a particular contract, any material changes could impact the timing of revenue recognition, which would have a material effect on our financial position and result of operations. This is because the contract consideration is allocated to each performance obligation, delivered or undelivered, at the inception of the contract based on the SSP of each distinct performance obligation.

Taxes assessed by a governmental authority that are both imposed on and concurrent with a specific revenue-producing transaction, that are collected by the Company from a customer, are excluded from revenue.

Shipping and handling costs associated with outbound freight after control over a product has transferred to a customer are accounted for as a fulfillment cost and are in included in cost of revenues as consistent with treatment in prior periods.

Our current Barocycler® instruments require a basic level of instrumentation expertise to set-up for initial operation. To support a favorable first experience for our customers, upon customer request, and for an additional fee, we will send a highly trained technical representative to the customer site to install Barocyclers® that we sell, lease, or rent through our domestic sales force. The installation process includes uncrating and setting up the instrument, followed by introductory user training. Our sales arrangements do not provide our customers with a right of return. Any shipping costs billed to customers are recognized as revenue.

The majority of our instrument and consumable contracts contain pricing that is based on the market price for the product at the time of delivery. Our obligations to deliver product volumes are typically satisfied and revenue is recognized when control of the product transfers to our customers. Concurrent with the transfer of control, we typically receive the right to payment for the shipped product and the customer has significant risks and rewards of ownership of the product. Payment terms require customers to pay shortly after delivery and do not contain significant financing components.

Revenue from scientific services customers is recognized upon completion of each stage of service as defined in service agreements.

We apply ASC 845, "Accounting for Non-Monetary Transactions", to account for products and services sold through non-cash transactions based on the fair values of the products and services involved, where such values can be determined. Non-cash exchanges would require revenue to be recognized at recorded cost or carrying value of the assets or services sold if any of the following conditions apply:

a) The fair value of the asset or service involved is not determinable.

b) The transaction is an exchange of a product or property held for sale in the ordinary course of business for a product or property to be sold in the same line of business to facilitate sales to customers other than the parties to the exchange.

c) The transaction lacks commercial substance.

We recognize revenue for non-cash transactions at recorded cost or carrying value of the assets or services sold.

We account for lease agreements of our instruments in accordance with ASC 842, Leases. 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 Barocycler® instrument. The depreciation expense associated with assets under lease agreement is included in the "Cost of PCT products and services" line item in our accompanying 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.

Deferred revenue represents amounts received from service contracts for which the related revenues have not been recognized because one or more of the revenue recognition criteria have not been met. Revenue from service contracts is recorded ratably over the length of the contract.

Disaggregation of revenue

In the following table, revenue is disaggregated by primary geographical market, major product line, and timing of revenue recognition.

In thousands of US dollars ($)	Three Months Ended June 30,		Six Months Ended June 30,	
Primary geographical markets	2021	2020	2021	2020
North America	$ 477	$ 162	$ 685	$ 307
Europe	103	3	187	4
Asia	29	103	297	211
	$ 609	$ 268	$ 1,169	$ 522

	Three Months Ended June 30,		Six Months Ended June 30,	
Major products/services lines	2021	2020	2021	2020
Hardware	$ 336	$ 122	$ 713	$ 217
Consumables	44	51	146	107
Contract research services	136	34	142	44
Sample preparation accessories	40	33	69	58
Technical support/extended service contracts	34	17	58	36
Shipping and handling	16	6	35	15
Other	3	5	6	45
	$ 609	$ 268	$ 1,169	$ 522

Timing of revenue recognition	Three Months Ended June 30, 2021	Three Months Ended June 30, 2020	Six Months Ended June 30, 2021	Six Months Ended June 30, 2020
Products transferred at a point in time	$ 440	$ 217	$ 969	$ 442
Services transferred over time	169	51	200	80
	$ 609	$ 268	$ 1,169	$ 522

Contract balances

In thousands of US dollars ($)	June 30, 2021	December 31, 2020
Receivables, which are included in ‘Accounts Receivable’	$ 630	$ 131
Contract liabilities (deferred revenue)	57	67

Transaction price allocated to the remaining performance obligations.

The following table includes estimated revenue expected to be recognized in the future related to performance obligations that are unsatisfied (or partially unsatisfied) at the end of the reporting period.

Schedule of Future Related to Performance Obligations

In thousands of US dollars ($)	2021	2022	Total
Extended warranty service	$ 49	8	$ 57

All consideration from contracts with customers is included in the amounts presented above.

Contract Costs

The Company recognizes the incremental costs of obtaining contracts as an expense when incurred if the amortization period of the assets that the Company otherwise would have recognized is one year or less. These costs are included in selling, general, and administrative expenses. The costs to obtain a contract are recorded immediately in the period when the revenue is recognized either upon shipment or installation. The costs to obtain a service contract are considered immaterial when spread over the life of the contract so the Company records the costs immediately upon billing.

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 and six months ended June 30, 2021 and 2020.

	For the Three Months Ended June 30,	
	2021	2020
Top Five Customers	50%	71%
Federal Agencies	14%	2%

	For the Six Months Ended June 30,	
	2021	2020
Top Five Customers	50%	70%
Federal Agencies	8%	4%

The following table illustrates the level of concentration as a percentage of net accounts receivable balance as of June 30, 2021 and December 31, 2020. The Top Five Customers category may include federal agency receivable balances if applicable.

	June 30, 2021	December 31, 2020
Top Five Customers	56%	89%
Federal Agencies	11%	10%

Product Supply

We utilize a contract assembler for our Barocycler® 2320EXT. They provide us with precision manufacturing services that include management support services to meet our specific application and operational requirements. Among the services provided to us are:

- CNC Machining
- Contract Assembly & Kitting
- Component and Subassembly Design
- Inventory Management
- ISO certification

At this time, we believe that outsourcing contract assembly of our Barocycler® 2320EXT is the most cost-effective method for us to obtain ISO Certified, CE and CSA Marked instruments. The Company also continues to evaluate the potential economic benefits of bringing instrument assembly in-house.

We currently manufacture and assemble the Barocycler®, HUB440, HUB880, the SHREDDER SG3, and most of our consumables at our South Easton, MA facility. We will regularly reassess the tradeoffs between in-house assembly versus the benefits of outsourced relationships for of the entire Barocycler® product line, and future instruments.

Investment in Equity Securities

As of June 30, 2021, we held 100,250 shares of common stock of Nexity Global SA, (a Polish publicly traded company).

We account for this investment in accordance with ASC 320 "Investments — Debt and Equity Securities". ASC 320 requires equity investments with readily determinable fair values to be measured at fair value with changes in fair value recognized in net income.

As of June 30, 2021, our consolidated balance sheet reflected the fair value, determined on a recurring basis based on Level 1 inputs of our investment in Nexity, to be $274,621. We recorded $242,380 as an unrealized loss during the six months ended June 30, 2021 for changes in market value.

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 and six months ended June 30, 2021 and 2020:

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
	2021	2020	2021	2020
Numerator:				
Net loss attributable to common stockholders	$ (5,149,342)	$ (4,965,752)	$ (12,188,028)	$ (9,244,223)
Denominator for basic and diluted loss per share:				
Weighted average common stock shares outstanding	5,748,711	2,914,659	5,312,172	2,765,132
Loss per common share – basic and diluted	$ (0.90)	$ (1.70)	$ (2.29)	$ (3.34)

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 and H2 Convertible Preferred Stock, Series J Convertible Preferred Stock, Series K Convertible Preferred Stock, and Series AA Convertible Preferred Stock are presented below as if they were converted into common shares according to the conversion terms.

	As of June 30,	
	2021	2020
Stock options	1,350,046	1,392,370
Convertible debt	5,083,187	3,905,867
Common stock warrants	15,703,807	12,761,126
Convertible preferred stock:		
Series D Convertible Preferred Stock	25,000	25,000
Series G Convertible Preferred Stock	26,857	26,857
Series H Convertible Preferred Stock	33,334	33,334
Series H2 Convertible Preferred Stock	70,000	70,000
Series J Convertible Preferred Stock	115,267	115,267
Series K Convertible Preferred Stock	229,334	229,334
Series AA Convertible Preferred Stock	8,083,000	7,939,000
	30,719,832	26,498,155

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.

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 $63,458 and $65,341 for the three months ended June 30, 2021 and 2020, respectively. The Company recognized stock-based compensation expense of $124,695 and $307,110 for the six months ended June 30, 2021 and 2020, 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 Consolidated Statements of Operations:

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
	2021	2020	2021	2020
Cost of sales	$ 5,107	$ 5,107	$ 10,160	$ 13,063
Research and development	26,491	26,137	52,353	64,963
Selling and marketing	5,887	6,358	10,482	20,294
General and administrative	25,973	27,739	51,700	208,790
Total stock-based compensation expense	$ 63,458	$ 65,341	$ 124,695	$ 307,110

Fair Value of Financial Instruments

Due to their short maturities, the carrying amounts for cash and cash equivalents, accounts receivable, accounts payable, accrued expenses and debt approximate their fair value. Long-term liabilities include debt and deferred revenue with a carrying value that approximates 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. A slight change in an unobservable input like volatility could have a significant impact on fair value measurement.

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 its financial assets are classified within Level 1 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 assets and liabilities that were accounted for at fair value on a recurring basis as of June 30, 2021:

		Fair value measurements at June 30, 2021 using:		
	June 30, 2021	**Quoted prices in active markets (Level 1)**	**Significant other observable inputs (Level 2)**	**Significant unobservable inputs (Level 3)**
Equity Securities	$ 274,621	$ 274,621	-	-
Total Financial Assets	$ 274,621	$ 274,621	$ -	$ -

The following tables set forth the Company's financial assets and liabilities that were accounted for at fair value on a recurring basis as of December 31, 2020:

		Fair value measurements at December 31, 2020 using:		
	December 31, 2020	**Quoted prices in active markets (Level 1)**	**Significant other observable inputs (Level 2)**	**Significant unobservable inputs (Level 3)**
Equity Securities	517,001	517,001	-	-
Total Financial Assets	$ 517,001	$ 517,001	$ -	$ -

4) **Commitments and Contingencies**

Operating Leases

The Company accounts for its leases under ASC 842. The Company has elected to apply the short-term lease exception to leases of one year or less.

Our corporate office is currently located at 14 Norfolk Avenue, South Easton, Massachusetts 02375. We are currently paying $6,950 per month, on a lease extension, signed on December 30, 2020, that expires December 31, 2021, for our corporate office. We expanded our space to include offices, warehouse, and a loading dock on the first floor starting May 1, 2017 with a monthly rent increase already reflected in the current payments.

We extended our lease for our space in Medford, MA (the "Medford Lease") from December 30, 2020 to December 30, 2023. The lease requires monthly payments of $7,282 subject to annual cost of living increases. The lease shall be automatically extended for additional three years unless either party terminates at least six months prior to the expiration of the current lease term.

The Company accounted for the lease extension of our Medford Lease as a lease modification under ASC 842. At the effective date of modification, the Company recorded an adjustment to the right-of-use asset and lease liability in the amount of $221,432 based on the net present value of lease payments discounted using an estimated borrowing rate of 12%.

Following is a schedule by years of future minimum rental payments required under operating leases with initial or remaining non-cancelable lease terms as of June 30, 2021:

2021	$	85,391
2022		87,383
2023		87,383
Total minimum payments required	$	260,157

Target Discovery, Inc.

In the six months ended June 30, 2021, the Company incurred $34,400 in fees with Target Discovery, Inc. for the use of their facilities and other services.

5) **Convertible Debt and Other Debt**

Convertible Debt

On various dates during the six months ended June 30, 2021, the Company issued convertible notes for a total of $3,104,625 which contained varied terms and conditions as follows: a) 6-12 month maturity date; b) interest rates of 10-18%; c) convertible to the Company's common stock at issuance at a fixed rate of $2.50 or at variable conversion rates upon an event of default. These notes were issued with either shares of common stock or warrants to purchase common stock that were fair valued at issuance date. The aggregate relative fair value of the shares of common stock and warrants issued with the notes of $1,181,719 was recorded as a debt discount to be amortized over the term of the notes. We then computed the effective conversion price of the notes, and recorded a $566,847 beneficial conversion feature as a debt discount to be amortized over the term of the notes. We also evaluated the convertible notes for derivative liability treatment and determined that the notes did not qualify for derivative accounting treatment at June 30, 2021.

The specific terms of the convertible notes and outstanding balances as of June 30, 2021 are listed in the tables below.

Inception Date	Term	Loan Amount	Outstanding balance with OID	Original Issue Discount (OID)	Interest Rate	Conversion Price	Deferred Finance Fees	Discount for conversion feature and warrants/shares
May 17, 2018 (1) (2)	12 months	$ 380,000	$ 166,703	$ 15,200	8%	$ 2.50	$ 15,200	$ 332,407
June 8, 2018 (1) (4)	(1) 6 months	$ 50,000	$ 50,000	$ 2,500	2%	$ 7.50	$ 2,500	$ 3,271
October 19, 2018 (1)	6 months	$ 100,000	$ 100,000	$ -	5%	$ 7.50	$ -	$ -
November 13, 2018 (1) (3) (4)	6 months	$ 200,000	$ 78,508	$ -	5%	$ 2.50	$ -	$ 168,634
January 3, 2019 (1) (4)	6 months	$ 50,000	$ 50,000	$ 2,500	24%	$ 7.50	$ 2,500	$ -
February 21, 2019 (1) (2)	12 months	$ 215,000	$ 215,000	$ -	4%	$ 2.50	$ 15,000	$ 107,709
March 18, 2019 (1)	6 months	$ 100,000	$ 100,000	$ -	4%	$ 7.50	$ -	$ 10,762
June 4, 2019 (1) (2)	9 months	$ 500,000	$ 302,484	$ -	8%	$ 2.50	$ 40,500	$ 70,631
June 19, 2019 (1) (2)	12 months	$ 105,000	$ 105,000	$ -	4%	$ 2.50	$ 5,000	$ 2,646
June 7, 2019 (1) (4)	6 months	$ 125,000	$ 6,746	$ -	5%	$ 7.50	$ -	$ 18,254
July 1, 2019 (1) (2)	12 months	$ 107,500	$ 107,500	$ -	4%	$ 2.50	$ 7,500	$ 85,791
July 19, 2019 (1) (2)	12 months	$ 115,000	$ 115,000	$ -	4%	$ 2.50	$ 5,750	$ 15,460
July 19, 2019 (1) (2)	12 months	$ 130,000	$ 130,000	$ -	6%	$ 2.50	$ 6,500	$ -
September 27, 2019 (1) (2)	12 months	$ 78,750	$ 78,750	$ -	4%	$ 2.50	$ 3,750	$ 13,759
October 24, 2019 (1) (2)	12 months	$ 78,750	$ 78,750	$ -	4%	$ 2.50	$ 3,750	$ -
November 1, 2019 (1) (2)	12 months	$ 270,000	$ 270,000	$ -	6%	$ 2.50	$ 13,500	$ -
November 15, 2019 (1)	12 months	$ 385,000	$ 320,000	$ 35,000	10%	$ 2.50	$ 35,000	$ 90,917
January 2, 2020 (1)	12 months	$ 330,000	$ 330,000	$ 30,000	10%	$ 2.50	$ 30,000	$ 91,606
January 24, 2020 (1)	12 months	$ 247,500	$ 247,500	$ 22,500	10%	$ 2.50	$ 22,500	$ 89,707
January 29, 2020 (1)	12 months	$ 363,000	$ 363,000	$ 33,000	10%	$ 2.50	$ 33,000	$ 297,000
February 12, 2020 (1)	12 months	$ 275,000	$ 275,000	$ 25,000	10%	$ 2.50	$ 25,000	$ 225,000
February 19, 2020 (1)	12 months	$ 165,000	$ 165,000	$ 15,000	10%	$ 2.50	$ 15,000	$ 135,000
March 11, 2020 (1)	12 months	$ 330,000	$ 330,000	$ 30,000	10%	$ 2.50	$ 30,000	$ 232,810
March 13, 2020 (1)	12 months	$ 165,000	$ 165,000	$ 15,000	10%	$ 2.50	$ 15,000	$ 60,705
March 26, 2020 (1)	12 months	$ 111,100	$ 111,100	$ 10,100	10%	$ 2.50	$ 10,100	$ 90,900
April 8, 2020 (1)	12 months	$ 276,100	$ 276,100	$ 25,100	10%	$ 2.50	$ 25,000	$ 221,654
April 17, 2020 (1)	12 months	$ 143,750	$ 143,750	$ 18,750	10%	$ 2.50	$ -	$ 96,208
April 30, 2020 (1)	12 months	$ 546,250	$ 546,250	$ 71,250	10%	$ 2.50	$ 47,500	$ 427,500
May 6, 2020 (1)	12 months	$ 460,000	$ 460,000	$ 60,000	10%	$ 2.50	$ 40,000	$ 360,000
May 18, 2020 (1)	12 months	$ 546,250	$ 221,250	$ 46,250	10%	$ 2.50	$ 35,500	$ 439,500
June 2, 2020 (1)	12 months	$ 902,750	$ 652,750	$ 92,750	10%	$ 2.50	$ 58,900	$ 708,500
June 12, 2020 (1)	12 months	$ 57,500	$ 57,500	$ 7,500	10%	$ 2.50	$ 5,000	$ 45,000
June 22, 2020 (1)	12 months	$ 138,000	$ 138,000	$ 18,000	10%	$ 2.50	$ 12,000	$ 108,000
July 7, 2020 (1)	12 months	$ 586,500	$ 586,500	$ 76,500	10%	$ 2.50	$ 51,000	$ 400,234
July 17, 2020 (1)	12 months	$ 362,250	$ 362,250	$ 47,250	10%	$ 2.50	$ 31,500	$ 185,698
July 29, 2020 (1)	12 months	$ 345,000	$ 345,000	$ 45,000	10%	$ 2.50	$ 30,000	$ 241,245
July 21, 2020 (1) (5)	12 months	$ 115,000	$ 115,000	$ 15,000	10%	$ 2.50	$ 10,000	$ 24,875
August 14, 2020 (1)	12 months	$ 762,450	$ 462,450	$ 69,450	10%	$ 2.50	$ 66,300	$ 580,124
September 10, 2020	12 months	$ 391,000	$ 391,000	$ 51,000	10%	$ 2.50	$ 34,000	$ 231,043
September 21, 2020 (5)	12 months	$ 345,000	$ 345,000	$ 45,000	10%	$ 2.50	$ 30,000	$ 66,375
September 23, 2020 (5)	12 months	$ 115,000	$ 115,000	$ 15,000	10%	$ 2.50	$ 10,000	$ 20,500
September 25, 2020 (5)	12 months	$ 115,000	$ 115,000	$ 15,000	10%	$ 2.50	$ -	$ 19,125
December 3, 2020	12 months	$ 299,000	$ 299,000	$ 39,000	10%	$ 2.50	$ 26,000	$ 197,882
October 22, 2020 (5)	12 months	$ 115,000	$ 115,000	$ 15,000	10%	$ 2.50	$ 10,000	$ 18,875
December 23, 2020 (1) (5)	6 months	$ 1,000,000	$ 150,000	$ 100,000	10%	$ 2.50	$ -	$ 833,536
January 5, 2021 (1)	6 months	$ 575,000	$ 575,000	$ 75,000	18%	$ 2.50	$ -	$ -
February 17, 2021	12 months	$ 230,000	$ 230,000	$ 30,000	10%	$ 2.50	$ 20,000	$ 180,000
March 23, 2021	12 months	$ 55,000	$ 55,000	$ 5,000	10%	$ 2.50	$ -	$ 36,431
May 24, 2021	6 months	$ 54,625	$ 54,625	$ 7,125	12%	$ 2.50	$ -	$ -
May 6, 2021	12 months	$ 402,500	$ 402,500	$ 52,500	10%	$ 2.50	$ 35,000	$ 312,551
June 17, 2021	12 months	$ 230,000	$ 230,000	$ 30,000	10%	$ 2.50	$ 20,000	$ 144,760
June 25, 2021	12 months	$ 977,500	$ 977,500	$ 127,500	10%	$ 2.50	$ -	$ 773,802
May 20, 2021	12 months	$ 180,000	$ 180,000	$ 30,000	10%	$ 2.50	$ 15,000	$ 25,824
June 3, 2021	12 months	$ 50,000	$ 50,000	$ 1,500	12%	$ 2.50	$ -	$ 7,948
June 28, 2021	12 months	$ 350,000	$ 350,000	$ 35,000	12%	(6)	$ 22,750	$ 267,250
			$ 13,262,466	$ 1,502,225			$ 972,500	$ 9,117,409

(1) The Note is past due. The Company and the lender are negotiating in good faith to extend the loan.
(2) The Company and lender have agreed to the extension of the Standstill and Forbearance agreements (as described below).
(3) Interest was capitalized and added to outstanding principal.
(4) During the year ended December 31, 2020 the Company entered into Rate Modification Agreements with these lenders. In these agreements five lenders agreed to reduce their interest rate and were granted the right to convert loans using a variable conversion price if more than one other variable rate lender converted at a variable rate.
(5) The Company has agreed to issue shares of its common stock to lenders if their notes are not repaid by a defined date.
(6) Loan is not convertible until 180 days from the date of issuance of the Note and following an Event of Default will be convertible at the lesser of $2.50 per share or 90% of the lowest trading price over the previous 20 days. The loan is guaranteed by the Company's Chief Executive Officer, but the lender may only enforce this guarantee after certain conditions have been met, specifically after (i) the occurrence of an Event of Default (as defined in the Note), (ii) the failure of the Company to cure the Default in 10 business days, and (iii) a failure by the Company to issue, or cause to be issued, shares of its common stock upon submission by the lender of a notice of conversion.

As of June 30, 2021 one lender holds approximately $9.1 million of the $13.3 million convertible notes outstanding.

For the six months ended June 30, 2021, the Company recognized amortization expense related to the debt discounts indicated above of $3,864,956. The unamortized debt discounts as of June 30, 2021 related to the convertible debentures and other convertible notes amounted to $2,353,152.

Standstill and Forbearance Agreements

The Company has entered into Standstill and Forbearance Agreements with lenders who hold convertible notes with a total principal as of June 30, 2021 of $1.57 million. Pursuant to the Standstill and Forbearance Agreements, the lenders agreed to not convert any portion of their notes into shares of common stock at a variable rate until March 31, 2021 for convertible notes with a principal balance of $469 thousand and until April 16, 2021 for convertible notes with a principal balance of $1.1 million. For the six months ended June 30, 2021, the Company incurred fees of approximately $1.0 million in connection with these agreements. After June 30, 2021 the Company settled $827,500 of these loans (see Note 7).

Convertible Loan Modifications and Extinguishments

We refinanced certain convertible loans during the three months ended June 30, 2021 at substantially the same terms for extensions ranging over a period of three to six months. We amortized any remaining unamortized debt discount as of the modification date over the remaining, extended term of the new loans. We applied ASC 470 of modification accounting to the debt instruments which were modified during the quarter or those settled with new notes issued concurrently for the same amounts but different maturity dates. The terms such as the interest rate, prepayment penalties, and default rates will be the same over the new extensions. According to ASC 470, an exchange of debt instruments between or a modification of a debt instrument by a debtor and a creditor in a nontroubled debt situation is deemed to have been accomplished with debt instruments that are substantially different if the present value of the cash flows under the terms of the new debt instrument is at least 10 percent different from the present value of the remaining cash flows under the terms of the original instrument. If the terms of a debt instrument are changed or modified and the cash flow effect on a present value basis is less than 10 percent, the debt instruments are not considered to be substantially different and will be accounted for as modifications.

The cash flows of new debt exceeded 10% of the remaining cash flows of the original debt on several loans. During the six months ended June 30, 2021 we recorded losses on extinguishment of liabilities of approximately $1.6 million by calculating the difference of the fair value of the new debt and the carrying value of the old debt.

The following table provides a summary of the changes in convertible debt, net of unamortized discounts, during 2021:

		2021
Balance at January 1,	$	7,545,670
Issuance of convertible debt, face value		3,104,625
Deferred financing cost		(506,375)
Beneficial conversion feature on convertible note		(566,847)
Debt discount from shares and warrants issued with debt		(1,181,719)
Payments		(1,200,996)
Conversion of debt into equity		(150,000)
Accretion of interest and amortization of debt discount to interest expense		3,864,956
Balance at June 30,		10,909,314
Less: current portion		10,909,314
Convertible debt, long-term portion	$	–

Other Notes

On September 9, 2019 and February 28, 2020 we received a total of $966,500 unsecured non-convertible loans from a private investor with a one-month term. During the year ended December 31, 2020, the Company received net proceeds of $463,500, issued 150,000 warrants to purchase common stock (five-year term and $3.50 exercise price) and repaid $275,000. The relative fair value of $185,660 of the warrants issued with the note was recorded as a debt discount to be amortized over the term of the notes. As of June 30, 2021, the Company owes $691,500 on these notes which are past due. The Company and the investor are negotiating in good faith to extend the loans.

On October 1, 2019, the Company and the holder of the $170,000 non-convertible loan issued in May 2017 agreed to extend the term of the loan to December 31, 2019. The Company agreed to issue 1,200 shares of its common stock per month while the note remains outstanding. The note will continue to earn 10% annual interest. The loan is currently past due, and the Company and the investor are negotiating in good faith to extend the loan.

On October 11, 2019 we received a non-convertible loan with a one-month term and a 2% interest charge for $25,000 from a private investor. The loan is past due, and the Company and the investor are negotiating in good faith to extend the loan.

Merchant Agreements

We have signed various Merchant Agreements which are secured by second position rights to all customer receipts until the loan has been repaid in full and subject to interest rates of 9.3% - 11.5% per month. As illustrated in the following table, under the terms of these agreements, we received the disclosed Purchase Price and agreed to repay the disclosed Purchase Amount, which is collected by the Merchant lenders at the disclosed Daily Payment Rate. The Company's Chief Executive Officer is personally guaranteeing the performance of the merchant loans.

The following table shows our Merchant Agreements as of June 30, 2021:

Inception Date		**Purchase Price**		**Purchased Amount**		**Outstanding Balance**		**Daily Payment Rate**		**Deferred Finance Fees**
February 4, 2021		125,000		165,000		55,281		1,032		-
March 11, 2021		125,000		167,500		40,559		1,396		2,500
March 26, 2021		240,000		330,960		129,952		2,364		-
May 3, 2021		200,000		275,800		141,458		1,970		5,000
June 2, 2021		135,000		186,165		115,677		1,400		1,350
	$	825,000	$	1,125,425	$	482,927	$	8,162	$	8,850

The following table shows our Merchant Agreements as of December 31, 2020:

Inception Date		**Purchase Price**		Purchased Amount		Outstanding Balance		**Daily Payment Rate**		**Deferred Finance Fees**
November 5, 2020	$	200,000	$	275,800	$	163,955		1,724	$	-
November 19, 2020		100,000		137,900		85,013		985		-
	$	300,000	$	413,700	$	248,968	$	2,709	$	-

We have accounted for the Merchant Agreements as loans under ASC 860 because while we provided rights to current and future receipts, we still had control over the receipts. The difference between the Purchase Amount and the Purchase Price is imputed interest that is recorded as interest expense when paid each day.

Related Party Notes

In June 2018, we received a non-convertible loan of $15,000 from a private investor. The loan includes a one-year term and 15% guaranteed interest. This loan remains outstanding at June 30, 2021 and is currently past due.

During the six months ended June 30, 2021, we received short-term non-convertible loans of $171,600 from related parties and repaid $153,000 of related party loans. These notes bear interest ranging from 10% to 15% and are due upon demand.

Long term debt

During the six months ended June 30, 2021, the Company borrowed $367,038 through a COVID-19 program that was sponsored by the United States and administered by the Small Business Administration (the “SBA”). The most notable programs were the Payroll Protection Program (or “PPP”) and the Economic Injury Disaster Loan program (or “EIDL”). PPP loan has a 1% interest rate and a five-year term. During this period, the Company’s first PPP loan borrowed in 2020 ($367,039) was forgiven by the SBA. This gain was reported in losses on extinguishment of liabilities on the consolidated statements of operations.

The Company’s EIDL loan, $150,000, accrues interest at 3.75% and requires monthly payments of $731 for principal and interest beginning in June 2021. The balance of the principal will be due in 30 years. In connection with the EIDL loan the Company entered into a security agreement with the SBA, whereby the Company granted the SBA a security interest in all of the Company’s right, title and interest in all of the Company’s assets.

6) <u>Stockholders' Deficit</u>

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*")

12) 10,000 shares have been designated as Series AA Convertible Preferred Stock ("*Series AA*")

As of June 30, 2021, 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, 2020 for the pertinent disclosures of preferred stock.

During the six months ended June 30, 2021, the Company entered into Securities Purchase Agreements with accredited investors pursuant to which the Company sold an aggregate of 40 shares of Series AA Convertible Preferred Stock, each preferred share convertible into 1,000 shares of the Company's common stock, par value $0.01 per share, for an aggregate Purchase price of $100,000. We issued to the investors warrants to purchase an aggregate 40,000 shares of common stock with an exercise price of $3.50 per share. The Company did not incur any placement agent fees for this transaction.

Stock Options and Warrants

At the Company's December 12, 2013 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, 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 June 30, 2021, options to acquire 1,350,046 shares were outstanding under the Plan.

As of June 30, 2021, total unrecognized compensation cost related to the unvested stock-based awards was $218,339, which is expected to be recognized over weighted average period of 1.62 years. The aggregate intrinsic value associated with the options outstanding and exercisable, and the aggregate intrinsic value associated with the warrants outstanding and exercisable as of June 30, 2021, based on the June 30, 2021 closing stock price of $2.17, was $1,472,943.

The following table summarizes information concerning options and warrants outstanding and exercisable:

	Stock Options		Warrants			
	Weighted Average		Weighted Average			
	Shares	price per share	Shares	price per share	Shares	Total Exercisable
Balance outstanding, December 31, 2020	1,355,901	$ 0.69	14,434,702	$ 3.50	15,790,603	15,302,830
Granted	24,000	2.17	1,374,600	3.61	1,398,600	-
Exercised	(21,411)	0.69	-	-	(21,411)	-
Expired/forfeited	(8,444)	0.69	(105,495)	$ 3.50	(113,939)	-
Balance outstanding, June 30, 2021	1,350,046	$ 0.72	15,703,807	$ 3.50	17,053,853	16,699,039

In the six months ended June 30, 2021 the Company issued 24,000 stock options to an employee ($49,135 fair value, $2.17 exercise price, three-year vesting term and ten-year expiration term). As of June 30, 2021, the 1,350,046 stock options outstanding have a $0.72 weighted average exercise price and 8.22 years weighted average remaining term. Of these options, 995,232 are currently exercisable.

Common Stock and Warrant Issuances

As profiled in the following table, for five loans we are obligated to issue common stock if not paid by defined dates.

Loan	Loan Issuance Date	Loan Principal	Shares Issuable	Defined Date	Defined Frequency
Loan 1	July 21, 2020	$ 115,000	5,000	September 30, 2020	Monthly
Loan 2	September 21, 2020	$ 345,000	12,500	November 16, 2020	Weekly
Loan 3	September 23, 2020	$ 115,000	12,500	December 1, 2020	Weekly
Loan 4	September 25, 2020	$ 115,000	12,500	December 1, 2020	Weekly
Loan 5	October 22, 2020	$ 115,000	12,500	December 1, 2020	Weekly

For our loan dated December 23, 2020, we are obligated to issue 100,000 warrants if the loan is not repaid before January 23, 2021 and an additional 10,000 shares of common stock and 100,000 warrants if the loan is not repaid before February 23, 2021. We are also obligated to issue 10,000 shares of common stock and 200,000 warrants if the loan is not repaid before March 23, 2021. During the six months ended June 30, 2021 the Company issued 400,000 warrants to this lender ($3.50 exercise price and five-year term) with a fair value of $600,298. The Company is also obligated to issue 10,000 shares of common stock to this lender every 31 days up to the loan's maturity date on June 23, 2021.

During the six months ended June 30, 2021, we issued 1,642,982 shares of common stock with a fair value of approximately $3.5 million to lenders for interest paid-in-kind, 112,400 shares with a fair value of $238,512 for services rendered, 139,700 shares with a fair value of $349,250 for conversions of debt principal and interest, 21,411 shares for stock option exercises (at an exercise price of $0.69 per share), 56,067 shares with a fair value of $114,298 for dividends paid-in-kind and 120,000 shares with a fair value of $112,877 for Common Stock issued with debt. During this period, we also issued 1,374,600 warrants (three to five-year term at a $3.50 to $5.00 exercise price) to acquire common stock at a fair value of $1.7 million to lenders in conjunction with signing of new convertible loans and interest paid-in-kind.

During the six months ended June 30, 2020, we issued to Series AA holders 64,388 shares of common stock for dividends totaling of $176,748 issued in stock in lieu of cash. During this period the Company also issued 593,277 shares of restricted common stock at a fair value of $1,693,251 to accredited investors and consultants. 420,746 of the shares with a fair value of $1,317,649 were issued for conversions of debt principal and interest; 81,031 of the shares with a fair value of $159,784 were issued for debt extensions and interest payments; 66,500 shares with a fair value of $127,855 were issued to settle an accrued liability; and 25,000 shares with a fair value of $87,963 were issued for services rendered.

7) <u>Subsequent Events</u>

From July 1, 2021 through August 10, 2021 the Company received seven new fixed rate convertible loans for a total of $1.5 million. The Company issued 125,000 shares of common stock and 161,000 warrants (3-year and 5-year lives and $3.50 strike price) as fees paid to lenders. These loans have fixed conversion rates of $2.50-$3.00 (one has a variable conversion rate), carry annual interest rates ranging from 10% to 12%, and terms ranging from six to twelve months. One of the loans (for $735,000) is secured by the assets of PBI Agrochem, Inc., a newly incorporated subsidiary of the Company.

In this time period, the Company retired loans with a principal amount of $973,408 (dated June 8, 2018, November 13, 2018, February 21, 2019, June 19, 2019, July 1, 2019, July 19, 2019, and November 1, 2019) for $167,954 and 763,420 shares of common stock (settling principal, interest and fees) and reduced the principal of another loan with a $100,000 cash payment. After this activity, the Company had $741,687 of principal outstanding with two lenders subject to the standstill and forbearance agreements, which expired March 31, 2021 (see Note 5).

The Company is obligated to issue 665,000 shares of common stock to certain lenders for the quarter ended June 30, 2021, but has not issued the shares. The Company and the lenders are negotiating in good faith to resolve these loans and expect to reach a settlement in the coming month.

During this period, the Company also received $900,000 from the sale of Series AA shares (issuing 360,000 warrants with a five-year term and strike price of $3.50), and repaid $103,600 of related party loans.

In this time period, the Company also entered into a Merchant Cash lender agreement (collecting $66,677) and repaid an existing Merchant Cash lender for $62,832. Under this agreement, the Company pays $1,278 each business day to the lender. During this period, the Company also borrowed and repaid a $300,000 line-of-credit from a second lender.

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 will have sufficient liquidity to finance normal operations for the foreseeable future;
- the options we may pursue in light of our financial condition;
- the potential applications for Ultra Shear Technology (*UST*);
- the potential applications of the BaroFold high-pressure protein refolding and disaggregation technology
- 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;
- the expected increase in the number of pressure cycling technology (*"PCT")* and constant pressure (*"CP"*) based units that we believe will be installed and the expected increase in revenues from the sale of consumable products, extended service contracts, and biopharma contract services;
- our belief that PCT has achieved initial market acceptance in the mass spectrometry and other markets;
- 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, biopharma contract services and Ultra Shear Technology;
- general economic conditions;
- the anticipated future financial performance and business operations of our company;
- our reasons for focusing 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 and protein characterization in biomarker discovery, forensics, and histology, as well as 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 and services;
- 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, as well as for our other products and services in both the BaroFold and Ultra Shear Technology areas.

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, 2020 and in this Report. We qualify all of our forward-looking statements by these cautionary statements.

OVERVIEW:

We are a leader in the development and sale of innovative, broadly enabling, pressure-based platform solutions for the worldwide life sciences industry. Our solutions are based on the unique properties of both constant (i.e., static) and alternating (i.e., pressure cycling technology, or “PCT”) hydrostatic pressure. PCT is a patented enabling technology platform that uses alternating cycles of hydrostatic pressure between ambient and ultra-high levels to control bio-molecular interactions safely and reproducibly (e.g., cell lysis, biomolecule extraction). Our primary focus has historically been in the development of PCT-based products for biomarker and target discovery, drug design and development, biotherapeutics characterization and quality control, soil & plant biology, forensics, and counter-bioterror applications. Additionally, major new market opportunities have emerged in the use of our pressure-based technology expertise in two new platform technology areas: (1) the use of our patented technology from BaroFold, Inc. for gently controlled disaggregation and refolding of biotherapeutic proteins (the “BaroFold” technology) to allow entry into the bio-pharma contract services sector, and (2) the use of our recently-patented, scalable, high-efficiency, pressure-based Ultra Shear Technology (“UST”) platform to (i) create stable nanoemulsions of otherwise immiscible fluids (e.g., oils and water) for greatly improved cost-effectiveness, high bioavailability, safer and improved sensory experience in products spanning pharmaceuticals, nutraceuticals, cosmeceuticals, personal care products, agrochemicals, food/beverage and many industrial products and to (ii) prepare higher quality, homogenized, extended shelf-life or room temperature stable low-acid liquid foods that cannot be effectively preserved using existing non-thermal technologies.

Developments and Accomplishments:

We reported the following accomplishments during the first half of 2021:

- On May 13, 2021, PBI was awarded three additional patents for its revolutionary Ultra Shear Technology™ (UST™) platform, all entitled "System for High Pressure, High Shear Processing of Fluids". The new patents, awarded in Japan (No. 6843063), Australia (No. 2016243553), and China (ZL201680026865.2), bring the Company's Intellectual Property ("IP") estate to a total of 6 issued patents for UST and 29 issued patents overall.

- On April 14, 2021, PBI finalized terms and executed a new letter of intent to purchase the assets of an internationally-based developer and supplier of organically natural, eco-friendly agrochemicals.

- On March 15, 2021, PBI discussed partnerships with Leica Microsystems (cancer diagnostics) and Ohio State University (food industry consortium) with the Stock Day Podcast.

- On March 4, 2021, PBI reported that the transformative impact of the food industry consortium formed by Pressure BioSciences and Ohio State University was discussed in a showcase video from Emerging Technology Insider.

- On February 24, 2021, PBI and Ohio State University announced the formation of a food industry consortium to advance commercialization of the Company's Ultra Shear Technology (UST) platform.

- On February 8, 2021, PBI announced plans to acquire the assets of a global eco-friendly agrochemical supplier.

- On January 20, 2021, PBI targeted a revolution in effectiveness of therapeutics via improved drug delivery and dosing safety when the Company announced a collaboration with SinuSys Corp to improve and optimize their lead sinus health product candidate prior to Phase IIb trials.

Results of Operations

The following disclosure compares the results of operations for the quarter ended June 30, 2021 (“Q2 2021”) with June 30, 2020 (“Q2 2020”) and compares the six months ended June 30, 2021 with June 30, 2020.

Products and Services Revenue

We recognized total revenue of $608,927 for Q2 2021 compared to $268,154 for Q2 2020, a 127% increase. For the year-to-date periods ending on June 30, 2021 and 2020 we recognized total revenue of $1,168,801 and $522,027, respectively, a 124% increase.

Cost of Products and Services

The cost of products and services was $286,660 for Q2 2021 compared to $134,882 for Q2 2020. For the year-to-date periods ending on June 30, 2021 and 2020 our cost of products and services was $512,935 and $310,028, respectively. Gross profit margin on products and services increased from a larger portion of biopharma services that have higher profit margins (to 52.9% in Q2 2021 from 49.6% in Q2 2020 and to 56.1%in the year-to-date period ended June 30, 2021 from 40.6% in the year-to-date period ended June 30, 2020).

Research and Development

Research and development expenses were $256,507 for Q2 2021 compared to $294,602 for Q2 2020. The reported decrease of 13% was attributable to a decrease in outside services. For the year-to-date periods ending on June 30, 2021 and 2020 these expenses were $556,450 and $560,292, respectively. The reported decrease was 1%.

Selling and Marketing

Selling and marketing expenses were $92,813 for Q2 2021 compared to $162,098 for Q2 2020. The reported decreases were primarily attributable to reduced employees in sales and marketing. For the year-to-date periods ending on June 30, 2021 and 2020 these expenses were $186,141 and $351,214, respectively.

General and Administrative

General and administrative expenses were $619,286 for Q2 2021 compared to $1,007,215 for Q2 2020. For the year-to-date periods ending on June 30, 2021 and 2020 these expenses were $1,634,716 and $2,026,225 respectively. The reported decreases were attributable to lower investor relations expenses.

Operating Loss

Operating loss was $646,339 for Q2 2021 compared to $1,330,643 for Q2 2020, a reduction of $684,304, or 51.4%. For the year to date periods ending of June 30, 2021 and 2020 the operating loss was $1,721,441 and $2,725,732, respectively, a $1,004,291 reduction, or 36.8%. The reported decreases were primarily attributable to revenue increases and decreases in costs and expenses in 2021.

Interest Expense, net

Interest expense was $3,526,141 for Q2 2021 compared to $1,724,879 for Q2 2020. For the year-to-date periods ending on June 30, 2021 and 2020 these expenses were $8,194,205 and $3,296,679, respectively. The increases were primarily attributable to the increase in convertible and other debt and the issuance of common stock for interest paid-in-kind.

Unrealized (loss) gain on investment in equity securities

Unrealized loss on investments in equity securities was $134,477 for Q2 2021 compared to an unrealized gain of $196,891 for Q2 2020. For the year-to-date periods ending on June 30, 2021 and 2020 the unrealized loss was $242,380 and an unrealized gain of $346,262, respectively. The reported change was attributable to movement in the market price of the Company’s investment in Nexity.

Loss on extinguishment of liabilities

In connection with debt extensions and forgiveness, we recognized net losses of $498,226 for Q2 2021 compared to $1,710,151 for Q2 2020. For the year-to-date periods ending on June 30, 2021 and 2020 these losses were $1,223,385 and $2,846,518, respectively. The decreases were principally related to the gain recognized on the forgiveness of our first PPP loan of $367,039.

Net loss attributable to common stockholders

Net loss attributable to common stockholders was $5,149,342 ($0.90 per share) for Q2 2021 compared to $4,965,752 ($1.70 per share) for Q2 2020. For the year-to-date periods ending on June 30, 2021 and 2020 the losses were $12,188,028 ($2.29 per share) and $9,244,223 ($3.34 per share), respectively. The decreases in loss per share were principally attributable to the increase in weighted shares outstanding.

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 June 30, 2021, 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. As described in Notes 5 and 6 of the accompanying consolidated financial statements, we have been successful in raising debt and equity capital. We received $4.0 million in net proceeds from loans and sales of preferred stock in the six months ended June 30, 2021. We have efforts in place to continue to raise cash through debt and equity offerings. (See Note 7 to the financial statements)

We will need substantial additional capital to fund our operations in future periods. If 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 six months ended June 30, 2021 was $2,090,727 as compared to $2,800,494 for the three months ended June 30, 2020.

Net cash used in investing activities for the six months ended June 30, 2021 was $3,962 compared to $532,913 in the six months ended June 30, 2020.

Net cash provided by financing activities for the six months ended June 30, 2021 was $2,122,774 as compared to $3,345,240 for the six months ended June 30, 2020. The cash flows from financing activities in the six months ended June 30, 2021 included $100,000 from the sale of Series AA preferred stock, $4.0 million loan proceeds from convertible debt and other debt. In this period, cash flow from financing was reduced by debt payments of $1,200,996 on convertible debt, and $744,041 on other debt.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

This Item 3 is not applicable to us as a smaller reporting company and has been omitted.

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 June 30, 2021, 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 June 30, 2021 is due to 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, 2020. These material weaknesses are the following:

- We identified 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.

- Management has identified 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 resulted in audit adjustments to the annual consolidated financial statements and revisions to related disclosures, valuation of warrants and other equity transactions.

- Limited policies and procedures that cover recording and reporting of financial transactions.

- Lack of multiple levels of review over the financial reporting process

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

- Improve the effectiveness of the accounting group by augmenting our existing resources with additional consultants or employees to assist in the analysis and recording of complex accounting transactions, and to simultaneously achieve desired organizational structuring for improved segregation of duties. We plan to mitigate this identified deficiency by hiring an independent consultant once we generate significantly more revenue or raise significant additional working capital.

- Improve expert review and achieve desired segregation procedures by strengthening cross approval of various functions including quarterly internal audit procedures where appropriate once we generate significantly more revenue or raise significantly more working capital.

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 consolidated financial statements as of and for the three-month period ended June 30, 2021, 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 June 30, 2021 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, 2020 and in this Item 1A. 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 the Company. 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 1A of our 10-K for the year ended December 31, 2020 other than the following:

We owe over $9 million to one lender with such loans secured by a security interest in all of our assets. If we default under our obligations pursuant to such loans, the lender could foreclose on all of our assets which could require us to cease our operations.

Through June 30, 2021, we have issued Notes to the same holder such that the current gross amount owed to the holder is approximately $9.1 million. Our obligations under the Notes and the transaction documents relating to the Notes are secured by a security interest in all of our assets. As a result, if we default under our obligations under the Notes or the transaction documents, the holders of the Notes, acting through their appointed agent, could foreclose on their security interests and liquidate some or all of these assets, which could harm our business, financial condition and results of operations and could require us to reduce or cease operations. In addition, the pledge of these assets and other restrictions may limit our flexibility in raising capital for other purposes. Because all of our assets are pledged under these financing arrangements, our ability to incur additional secured indebtedness or to sell or dispose of assets to raise capital may be impaired, which could have an adverse effect on our financial flexibility.

The holders of our Common Stock could suffer substantial dilution due to our corporate financing practices.

The holders of our common stock could suffer substantial dilution due to our corporate financing practices which, in the past few years has included private placements. As of June 30, 2021, we had 6,260,884 shares outstanding. As of June 30, 2021, if all of the outstanding shares of Series D Convertible Preferred Stock, Series G Convertible Preferred Stock, Series H Convertible Preferred Stock, Series H2 Convertible Preferred Stock, Series J Convertible Preferred Stock, Series K Convertible Preferred Stock and Series AA Convertible Preferred Stock were converted into shares of common stock and all outstanding options and warrants to purchase shares of common stock were exercised and all fixed rate convertible notes and debentures were converted, each as of June 30, 2021, an additional 30,719,832 shares of common stock would be issued and outstanding. The full cash exercise of the options and warrants would result in approximately $55.9 million in cash proceeds to the Company. This additional issuance of shares of common stock would cause immediate and substantial dilution to our existing stockholders and could cause a significant reduction in the market price of our common stock.

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

Except where noted, all the securities discussed in this Part II, Item 2 were issued in reliance on the exemption under Section 4(a)(2) of the Securities Act.

During the six months ended June 30, 2021, we issued 1,642,982 shares of common stock with a fair value of approximately $3.5 million to lenders for interest paid-in-kind, 112,400 shares with a fair value of $238,512 for services rendered, 139,700 shares with a fair value of $349,250 for conversions of debt principal and interest, 21,411 shares for stock option exercises (at an exercise price of $0.69 per share), 56,067 shares with a fair value of $114,298 for dividends paid-in-kind and 120,000 shares with a fair value of $112,877 for Common Stock issued with debt. During this period, we also issued 1,374,600 warrants (three to five-year term at a $3.50 to $5.00 exercise price) to acquire common stock at a fair value of $1.7 million to lenders in conjunction with signing of new convertible loans and interest paid-in-kind.

During the six months ended June 30, 2020, we issued to Series AA holders 64,388 shares of common stock for dividends totaling of $176,748 issued in stock in lieu of cash. During this period the Company also issued 593,277 shares of restricted common stock at a fair value of $1,693,251 to accredited investors and consultants. 420,746 of the shares with a fair value of $1,317,649 were issued for conversions of debt principal and interest; 81,031 of the shares with a fair value of $159,784 were issued for debt extensions and interest payments; 66,500 shares with a fair value of $127,855 were issued to settle an accrued liability; and 25,000 shares with a fair value of $87,963 were issued for services rendered.

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*	Certification by the Principal Executive Officer of Registrant pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (Rule 13a-14(a) or Rule 15d-14(a))
31.2*	Certification by the Principal Financial Officer of Registrant pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (Rule 13a-14(a) or Rule 15d-14(a))
32.1**	Certification by the Principal Executive Officer pursuant to 18 U.S.C. 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002*
32.2**	Certification by the Principal Financial Officer pursuant to 18 U.S.C. 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002*
101.INS*	XBRL Instance Document
101.SCH*	XBRL Taxonomy Extension Schema Document
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase Document

* Filed herewith.

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

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: August 18, 2021

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

EXHIBIT 31.1

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: August 18, 2021

/s/ Richard T. Schumacher

Richard T. Schumacher
President and Chief Executive Officer
Principal Executive Officer

EXHIBIT 31.2

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: August 18, 2021

/s/ Richard T. Schumacher

Richard T. Schumacher
Principal Financial Officer

EXHIBIT 32.1

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 June 30, 2021 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: August 18, 2021

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.

EXHIBIT 32.2

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 June 30, 2021 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Richard T. Schumacher, Principal 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: August 18, 2021

By: */s/ Richard T. Schumacher*
Richard T. Schumacher
President & Chief Executive 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.