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Documents	
10-Q	brhc20057217_10q.htm
Description	10-Q
EX-31.1	brhc20057217_ex31-1.htm
Description	Exhibit 31.1
EX-31.2	brhc20057217_ex31-2.htm
Description	Exhibit 31.2
EX-32.1	brhc20057217_ex32-1.htm
Description	Exhibit 32.1
EX-32.2	brhc20057217_ex32-2.htm
Description	Exhibit 32.2
EX-101.SCH	snwv-20230630.xsd
Description	XBRL Taxonomy Extension Schema
EX-101.CAL	snwv-20230630_cal.xml
Description	XBRL Taxonomy Extension Calculation Linkbase
EX-101.DEF	snwv-20230630_def.xml
Description	XBRL Taxonomy Extension Definition Linkbase
EX-101.LAB	snwv-20230630_lab.xml
Description	XBRL Taxonomy Extension Label Linkbase
EX-101.PRE	snwv-20230630_pre.xml
Description	XBRL Taxonomy Extension Presentation Linkbase

**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, 2023

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

For the transition period from _____ to

Commission File Number 000-52985

SANUWAVE Health, Inc.

(Exact name of registrant as specified in its charter)

Nevada

(State or other jurisdiction of incorporation or organization)

20-1176000

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

11495 Valley View Road

Eden Prairie, MN

(Address of principal executive offices)

55344

(Zip Code)

(770) 419-7525

(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
None	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, smaller reporting company, or an emerging growth 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:

Large accelerated filer

Non-accelerated filer

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 Rule 12b-2 of the Exchange Act). Yes No

As of August 7, 2023 there were issued and outstanding 1,026,078,464 shares of the registrant's common stock, \$0.001 par value per share.

SANUWAVE Health, Inc.

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Special Note Regarding Forward-Looking Statements

This Quarterly Report on Form 10-Q of SANUWAVE Health, Inc. and its subsidiaries (“SANUWAVE” or the “Company”) contains forward-looking statements. All statements in this Quarterly Report on Form 10-Q, including those made by the management of the Company, other than statements of historical fact, are forward-looking statements. Examples of forward-looking statements include statements regarding: results of operations, liquidity, and operations, restrictions and new regulations on our operations and processes, including the execution of clinical trials; the Company’s future financial results, operating results, and projected costs; market acceptance of and demand for UltraMIST and PACE® systems; management’s plans and objectives for future operations; industry trends; regulatory actions that could adversely affect the price of or demand for our approved products; our intellectual property portfolio; our business, marketing and manufacturing capacity and strategy; estimates regarding our capital requirements, the anticipated timing of the need for additional funds, and our expectations regarding future capital-raising transactions, including through investments by strategic partners for market opportunities, which may include strategic partnerships or licensing agreements, or raising capital through the conversion of outstanding warrants or issuances of securities; product liability claims; economic conditions that could adversely affect the level of demand for or cost of our products; timing of clinical studies and any eventual U.S. Food and Drug Administration (“FDA”) approval of new products and new uses of our existing products; financial markets; the competitive environment; supplier and customer disputes; and our plans to remediate our material weaknesses in our disclosure controls and procedures and our internal control over financial reporting. These forward-looking statements are based on management’s estimates, projections, and assumptions as of the date hereof and include the assumptions that underlie such statements. Forward-looking statements may contain words such as “may,” “will,” “should,” “could,” “would,” “expect,” “plan,” “anticipate,” “believe,” “estimate,” “predict,” “potential” and “continue,” the negative of these terms, or other comparable terminology. Any expectations based on these forward-looking statements are subject to risks and uncertainties and other important factors, including those discussed in the reports we file with the Securities and Exchange Commission (the “SEC”), specifically the sections titled “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in the Company’s Annual Report on Form 10-K for the year ended December 31, 2022, filed on March 31, 2023. Other risks and uncertainties are and will be disclosed in the Company’s subsequent SEC filings. These and many other factors could affect the Company’s future financial condition and operating results and could cause actual results to differ materially from expectations based on forward-looking statements made in this document or elsewhere by the Company or on its behalf. The Company undertakes no obligation to revise or update any forward-looking statements. The following information should be read in conjunction with the financial statements included in the Company’s Annual Report on Form 10-K for the year ended December 31, 2022, filed on March 31, 2023.

Except as otherwise indicated by the context, references in this Quarterly Report on Form 10-Q to “we,” “us” and “our” are to the consolidated business of the Company.

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PART I – FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

SANUWAVE HEALTH, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS
(UNAUDITED)
(In thousands, except share data)

	<u>June 30, 2023</u>	<u>December 31, 2022</u>
ASSETS		
Current Assets:		
Cash	\$ 332	\$ 1,153
Restricted Cash	850	-
Accounts receivable, net of allowance of \$1,214 and \$1,037, respectively	2,818	4,029
Inventory	900	868
Prepaid expenses and other current assets	1,201	570
Total Current Assets	6,101	6,620
Property, equipment and other, net	1,050	856
Intangible assets, net	4,786	5,137
Goodwill	7,260	7,260
Total Non-current Assets	13,096	13,253
Total Assets	\$ 19,197	\$ 19,873

LIABILITIES		
Current Liabilities:		
Senior secured debt, in default	\$ 16,123	\$ 14,416
Convertible promissory notes payable	17,712	16,713
Convertible promissory notes payable, related parties	8,346	7,409
Bridge notes advance	1,476	-
Accounts payable	4,859	4,400
Accrued expenses	6,351	8,512
Factoring liabilities	1,213	2,130
Warrant liability	14,410	1,416
Accrued interest	6,174	4,052
Accrued interest, related parties	1,438	788
Current portion of contract liabilities	67	60
Other	1,108	291
Total Current Liabilities	79,277	60,187
Non-current Liabilities		
Lease liabilities	515	438
Contract liabilities	215	230
Deferred tax liability	28	28
Total Non-current Liabilities	758	696
Total Liabilities	\$ 80,035	\$ 60,883

Commitments and Contingencies (Footnote 13)

STOCKHOLDERS' DEFICIT		
Preferred Stock, par value \$0.001, 5,000,000 shares authorized; 6,175 shares Series A, 293 shares Series B, 90 shares Series C and 8 shares Series D no shares issued and outstanding at June 30, 2023 and December 31, 2022	\$ -	\$ -
Common Stock, par value \$0.001, 2,500,000,000 shares authorized; 561,637,651 and 548,737,651 issued and outstanding at June 30, 2023 December 31, 2022, respectively	562	549
Additional paid-in capital	153,264	152,750
Accumulated deficit	(214,584)	(194,242)
Accumulated other comprehensive loss	(80)	(67)
Total Stockholders' Deficit	(60,838)	(41,010)
Total Liabilities and Stockholders' Deficit	\$ 19,197	\$ 19,873

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

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SANUWAVE HEALTH, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE (LOSS)/INCOME
(UNAUDITED)
(In thousands, except share data)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2023	2022	2023	2022
Revenue	\$ 4,675	\$ 3,882	\$ 8,450	\$ 7,077
Cost of Revenues	1,202	1,096	2,464	1,986
Gross Margin	<u>3,473</u>	<u>2,786</u>	<u>5,986</u>	<u>5,091</u>
Operating Expenses:				
General and administrative	1,238	3,781	3,997	5,986
Selling and marketing	978	1,672	2,390	3,387
Research and development	139	171	270	337
Depreciation and amortization	187	210	376	386
Total Operating Expenses	<u>2,542</u>	<u>5,834</u>	<u>7,033</u>	<u>10,096</u>
Operating Income/(Loss)	<u>931</u>	<u>(3,048)</u>	<u>(1,047)</u>	<u>(5,005)</u>
Other Income (Expense):				
Interest expense	(3,706)	(2,903)	(7,218)	(6,040)
Interest expense, related party	(675)	(56)	(1,441)	(112)
Change in fair value of derivative liabilities	(3,821)	7,861	(10,618)	11,343
Loss on issuance of debt	-	-	-	(3,434)
Loss on extinguishment of debt	-	(211)	-	(211)
Other (expense) income	9	1	(18)	2
Total Other (Expense)/Income	<u>(8,193)</u>	<u>4,692</u>	<u>(19,295)</u>	<u>1,548</u>
Net (Loss)/Income before Income Taxes	<u>(7,262)</u>	<u>1,644</u>	<u>(20,342)</u>	<u>(3,457)</u>
Provision for Income Taxes	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Net (Loss)/Income	<u>(7,262)</u>	<u>1,644</u>	<u>(20,342)</u>	<u>(3,457)</u>
Other Comprehensive Loss				
Foreign currency translation adjustments	<u>(9)</u>	<u>-</u>	<u>(13)</u>	<u>-</u>
Total Comprehensive (Loss)/Income	<u>\$ (7,271)</u>	<u>\$ 1,644</u>	<u>\$ (20,355)</u>	<u>\$ (3,457)</u>
(Loss) income per Share:				
Basic	<u>\$ (0.01)</u>	<u>\$ -</u>	<u>\$ (0.04)</u>	<u>\$ (0.01)</u>
Diluted	<u>\$ (0.01)</u>	<u>\$ -</u>	<u>\$ (0.04)</u>	<u>\$ (0.01)</u>
Weighted average shares outstanding				
Basic	<u>582,328,811</u>	<u>538,560,051</u>	<u>579,178,811</u>	<u>532,589,825</u>
Diluted	<u>582,328,811</u>	<u>871,984,091</u>	<u>579,178,811</u>	<u>532,589,825</u>

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

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SANUWAVE HEALTH, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' DEFICIT
(UNAUDITED)
(In thousands, except share data)

Three Months Ended June 30, 2023

	Common Stock			Accumulated Deficit	Accumulated Other Comprehensive Loss	Total
	Number of Shares Issued and Outstanding	Par Value	Additional Paid- in Capital			
Balances as of March 31, 2023	555,637,651	\$ 556	\$ 153,046	\$ (207,322)	\$ (71)	\$ (53,791)
Shares issued for services	6,000,000	6	218	-	-	224
Net loss	-	-	-	(7,262)	-	(7,262)
Foreign currency translation adjustment	-	-	-	-	(9)	(9)
Balances as of June 30, 2023	561,637,651	\$ 562	\$ 153,264	\$ (214,584)	\$ (80)	\$ (60,838)

Three Months Ended June 30, 2022

	Common Stock			Accumulated Deficit	Accumulated Other Comprehensive Loss	Total
	Number of Shares Issued and Outstanding	Par Value	Additional Paid- in Capital			
Balances as of March 31, 2022	517,195,705	\$ 517	\$ 150,533	\$ (189,050)	\$ (67)	\$ (38,067)
Shares issued for services	12,097,500	12	876	-	-	888
Net Income	-	-	-	1,644	-	1,644
Foreign currency translation adjustment	-	-	-	-	-	-
Balances as of June 30, 2022	529,293,205	\$ 529	\$ 151,409	\$ (187,406)	\$ (67)	\$ (35,535)

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

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SANUWAVE HEALTH, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' DEFICIT
(UNAUDITED)
(In thousands, except share data)

Six Months Ended June 30, 2023

	Common Stock			Accumulated Deficit	Accumulated Other Comprehensive Loss	Total
	Number of Shares Issued and Outstanding	Par Value	Additional Paid- in Capital			
Balances as of December 31, 2022	548,737,651	\$ 549	\$ 152,750	\$ (194,242)	\$ (67)	\$ (41,010)
Shares issued for services	12,900,000	13	514	-	-	527
Net loss	-	-	-	(20,342)	-	(20,342)
Foreign currency translation adjustment	-	-	-	-	(13)	(13)
Balances as of June 30, 2023	561,637,651	\$ 562	\$ 153,264	\$ (214,584)	\$ (80)	\$ (60,838)

Six Months Ended June 30, 2022

	Common Stock			Accumulated Deficit	Accumulated Other Comprehensive Loss	Total
	Number of Shares Issued and Outstanding	Par Value	Additional Paid- in Capital			
Balances as of December 31, 2021	481,619,621	\$ 482	\$ 144,582	\$ (183,949)	\$ (73)	\$ (38,958)
Cashless warrant exercise	14,000,000	14	2,152	-	-	2,166
Warrant exercise	909,091	1	99	-	-	100
Shares issued in conjunction with Note Payable	20,666,993	20	3,700	-	-	3,720
Shares issued for services	12,097,500	12	876	-	-	888
Net loss	-	-	-	(3,457)	-	(3,457)
Foreign currency translation adjustment	-	-	-	-	6	6
Balances as of June 30, 2022	529,293,205	\$ 529	\$ 151,409	\$ (187,406)	\$ (67)	\$ (35,535)

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

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SANUWAVE HEALTH, INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(UNAUDITED)
(In thousands)

	Six Months Ended June 30,	
	2023	2022
Cash Flows - Operating Activities:		
Net loss	\$ (20,342)	\$ (3,457)
Adjustments to reconcile net loss to net cash used by operating activities		
Depreciation and amortization	515	446
Bad debt expense	313	52
Shares issued for services	224	888
Change in fair value of derivative liabilities	10,618	(11,343)
Loss on extinguishment of debt	-	211
Loss on issuance of debt	-	3,434
Amortization of debt issuance costs and original issue discount	3,955	1,304
Accrued interest	3,606	1,327
Changes in operating assets and liabilities		
Accounts receivable - trade	898	733
Inventory	(31)	115
Prepaid expenses and other assets	(336)	(27)
Accounts payable	718	(486)
Accrued expenses	(1,337)	1,710
Contract liabilities	(16)	(108)
Net Cash Used in Operating Activities	<u>(1,215)</u>	<u>(5,201)</u>
Cash Flows - Investing Activities		
Proceeds from sale of property and equipment	-	948
Purchase of property and equipment	(169)	-
Net Cash Flows (Used in)/Provided by Investing Activities	<u>(169)</u>	<u>948</u>
Cash Flows - Financing Activities		
Proceeds from senior promissory notes	-	2,940
Proceeds from convertible promissory notes payable	1,202	-
Proceeds from bridge notes advance	1,476	2,130
Payments to factoring agent, net	(1,167)	55
Proceeds from warrant exercises	-	100
Payments of principal on finance leases	(85)	(121)
Net Cash Flows Provided by Financing Activities	<u>1,426</u>	<u>5,104</u>
Effect of Exchange Rates on Cash	<u>(13)</u>	<u>14</u>
Net Change in Cash and Restricted Cash During Period	29	865
Cash and Restricted Cash at Beginning of Period	1,153	619
Cash and Restricted Cash at End of Period	<u>\$ 1,182</u>	<u>\$ 1,484</u>
Supplemental Information:		
Cash paid for interest	<u>\$ 908</u>	<u>\$ 2,045</u>
Non-cash Investing and Financing Activities:		
Warrants issued in conjunction with senior secured promissory note payable and convertible promissory notes payable	\$ 570	\$ 2,654
Common shares issued for advisory shares	302	-
Embedded conversion feature on convertible promissory notes payable	157	-
Reclassification of warrant liability due to cashless warrant exercise	-	2,167
Common shares issued in conjunction with senior secured promissory note payable	-	3,720

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

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SANUWAVE HEALTH, INC. AND SUBSIDIARIES
NOTES TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
June 30, 2023

1. Nature of the Business and Basis of Presentation

SANUWAVE Health, Inc. and subsidiaries (“SANUWAVE” or the “Company”) is focused on the commercialization of its patented noninvasive and biological response activating medical systems for the repair and regeneration of skin, musculoskeletal tissue, and vascular structures.

Basis of Presentation – The accompanying unaudited condensed consolidated financial statements of the Company have been prepared in accordance with accounting principles generally accepted in the United States of America (“U.S. GAAP”) for interim financial information and with the instructions to Form 10-Q and Article 8-03 of Regulation S-X. Accordingly, these condensed consolidated financial statements do not include all the information and disclosures required by U.S. GAAP for comprehensive financial statements.

The financial information as of June 30, 2023, and for the three and six months ended June 30, 2023, and 2022 is unaudited; however, in the opinion of management, all adjustments (consisting of normal recurring accruals) considered necessary for a fair statement have been included. Operating results for the three and six months ended June 30, 2023, are not necessarily indicative of the results that may be expected for any other interim period or for the year ending December 31, 2023.

The condensed consolidated balance sheet on December 31, 2022, has been derived from the audited consolidated financial statements at that date but does not include all the information and disclosures required by U.S. GAAP for comprehensive financial statements. These financial statements should be read in conjunction with the Company’s December 31, 2022 Annual Report on Form 10-K filed with the SEC on March 31, 2023 (the “2022 Annual Report”).

Reclassifications - Certain accounts in the prior period condensed consolidated financial statements have been reclassified to conform to the presentation of the current period condensed consolidated financial statements. These reclassifications had no effect on the previously reported operating results.

2. Going Concern

The recurring losses from operations, the events of default on the Company’s notes payable, and dependency upon future issuances of equity or other financing to fund ongoing operations have raised substantial doubt as to our ability to continue as a going concern for a period of at least twelve months from the filing of this Form 10-Q. The Company expects to devote substantial resources for the commercialization of UltraMIST and PACE systems which will require additional capital resources to remain a going concern.

Management’s plans are to obtain additional capital in 2023 through the conversion of outstanding warrants, issuance of common or preferred stock, securities convertible into common stock, or secured or unsecured debt. These possibilities, to the extent available, may be on terms that result in significant dilution to the Company’s existing stockholders. In addition, there can be no assurances that the Company’s plans to obtain additional capital will be successful on the terms or timeline it expects, or at all. If these efforts are unsuccessful, the Company may be required to significantly curtail or discontinue operations or, if available, obtain funds through financing transactions with unfavorable terms.

The accompanying condensed consolidated financial statements have been prepared in conformity with U.S. GAAP, which contemplate continuation of the Company as a going concern and the realization of assets and satisfaction of liabilities in the normal course of business. The carrying amounts of assets and liabilities presented in the condensed consolidated financial statements do not necessarily purport to represent realizable or settlement values. The condensed consolidated financial statements do not include any adjustment that might result from the outcome of this uncertainty. The Company’s condensed consolidated financial statements do not include any adjustments relating to the recoverability of assets and classification of assets and liabilities that might be necessary should the Company be unable to continue as a going concern.

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3. Summary of Significant Accounting Policies

Significant accounting policies followed by the Company are summarized below and should be read in conjunction with those described in Note 4 of the consolidated financial statements in our 2022 Annual Report.

Estimates – These condensed consolidated financial statements have been prepared in accordance with U.S. GAAP. Because a precise determination of assets and liabilities, and correspondingly revenues and expenses, depend on future events, the preparation of condensed consolidated financial statements for any period necessarily involves the use of estimates and assumptions. Actual amounts may differ from these estimates. These condensed consolidated financial statements have, in management’s opinion, been properly prepared within reasonable limits of materiality and within the framework of the accounting policies summarized herein.

Significant estimates include the recording of allowances for doubtful accounts, the net realizable value of inventory, useful lives of long-lived assets, fair value of goodwill and other intangible assets, the determination of the valuation allowances for deferred taxes, estimated fair value of stock-based compensation, and the estimated fair value of financial instruments, including warrants and embedded conversion options.

Revenue Recognition - The core principle of Accounting Standards Codification (“ASC”) Topic 606 “Revenue from Contracts with Customers” (“ASC 606”) requires that an entity recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the company expects to be entitled in exchange for those goods or services. The Company allocates the transaction price to all contractual performance obligations included in the contract. If a contract has more than one performance obligation, we allocate the transaction price to each performance obligation based on standalone selling price, which depicts the amount of consideration we expect to be entitled in exchange for satisfying each performance obligation. The Company recognizes revenue primarily from the following types of contracts:

System Sales, Accessory and Part Sales - System sales, accessory and part sales include devices and applicators (new and refurbished). Performance obligations are satisfied at the point in time when the customer obtains control of the goods, which is generally at the point in time that the product is shipped.

Licensing Fees - Licensing transactions include distribution licenses and intellectual property licenses. Licensing revenue is recognized as the Company satisfies its performance obligations, which may vary with the terms of the licensing agreement.

Other Revenue - Other revenue primarily includes warranties, repairs, and billed freight. The Company allocates the device sales price to the product and the embedded warranty by reference to the stand-alone extended warranty price. Warranty revenue is recognized over the time that the Company satisfies its performance obligations, which is generally the warranty term. Repairs (parts and labor) and billed freight revenue are recognized at the point in time that the service is performed, or the product is shipped, respectively.

Recent Accounting Pronouncements – In June 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2016-13, Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments, which was subsequently revised by ASU 2018-19. The ASU introduces a new model for assessing impairment of most financial assets. Entities are required to use a forward-looking expected loss model, which replaces the current incurred loss model, resulting in earlier recognition of allowance for losses. The Company adopted this ASU in January 2023, and there was no material impact on the condensed consolidated financial statements.

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4. Loss/Income per Share

Diluted net (loss)/income per share is calculated by dividing the net (loss)/income attributable to common stockholders by the weighted average number of shares outstanding for the three and six months ended June 30, 2023, and 2022. The weighted average number of shares outstanding includes outstanding common stock and shares issuable for nominal consideration. Accordingly, warrants issued with a \$0.01 per share exercise price, are included in weighted average shares outstanding as follows:

(in Thousands)	Three Months Ended		Six Months Ended	
	June 30, 2023	June 30, 2022	June 30, 2023	June 30, 2022
Weighted average shares outstanding				
Common shares	560,638	518,074	557,488	508,399
Common shares issuable assuming exercise of nominally priced warrants	21,691	20,486	21,691	24,191
Weighted average shares outstanding	<u>582,329</u>	<u>538,560</u>	<u>579,179</u>	<u>532,590</u>

Diluted net income/ (loss) per share is computed by dividing the net income/ (loss) attributable to common stockholders by the weighted average number of shares of common stock and diluted common stock equivalents outstanding. To the extent that securities are “anti-dilutive,” they are excluded from the calculation of diluted net loss per share. As a result of the net loss for the three and six months ended June 30, 2023, and six months ended June 30, 2022, all potentially dilutive shares in such periods were anti-dilutive and therefore excluded from the computation of diluted net loss per share. As a result of the net income for the three months ended June 30, 2022, all dilutive shares were included in the computation of diluted net income per share. Anti-dilutive equity securities consisted of the following for the six months ended June 30, 2023, and 2022, respectively:

(in Thousands)	Six Months Ended	
	June 30, 2023	June 30, 2022
Common stock options	19,136	22,046
Common stock purchase warrants	1,247,911	189,157
Convertible notes payable	677,050	122,271
	<u>1,944,097</u>	<u>333,474</u>

5. Cash and Restricted Cash

The Company’s restricted cash consists of funds received from the Bridge Notes Advance disclosed in Note 9. In July 2023 this advanced funding was rolled in into Asset-Backed Secured Promissory Notes, see Note 14.

The following table provides a reconciliation of cash and restricted cash to the balance reflected on the Condensed Consolidated Statement of Cash Flows for the six months ended June 30, 2023:

(in Thousands)	June 30, 2023
Cash	\$ 332
Restricted Cash	850
Total Cash and Restricted Cash	<u>\$ 1,182</u>

6. Accrued Expenses

Accrued expenses consist of the following:

(in Thousands)	June 30, 2023	December 31, 2022
Registration penalties	\$ 1,583	\$ 1,583
License fees	892	892
Director and professional fees	877	586
Employee compensation	2,665	4,585
Other	334	866
	<u>\$ 6,351</u>	<u>\$ 8,512</u>

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7. Senior Secured Debt, In Default

The following table summarizes outstanding senior secured debt, in default:

(in thousands)	June 30, 2023				December 31, 2022			
	Principal	Debt Discount	Carrying Value	Accrued Interest	Principal	Debt Discount	Carrying Value	Accrued Interest
Senior secured debt	\$ 20,346	\$ (4,223)	\$ 16,123	\$ 2,676	\$ 19,211	\$ (4,795)	\$ 14,416	\$ 1,890

Senior secured promissory note payable, in default (“Senior Secured Note”) – In August 2020, the Company entered into a Note and Warrant Purchase and Security Agreement (the “NWPSA”). In accordance with the NWPSA, the Company issued a \$15 million Senior Secured Promissory Note Payable (the “Senior Secured Note”) and a warrant exercisable for shares of the Company’s common stock in exchange for cash to support operations, repay outstanding debt and close on the acquisition of the UltraMIST assets from Celularity Inc. (Celularity) among other transactions.

In February 2022, the Company entered into a Second Amendment to Note and Warrant Purchase and Security Agreement (the “Second NWPSA”) for \$3.0 million, for a total of \$18.0 million outstanding. Along with the issuance of the note, the Company also issued warrants to purchase 16.2 million shares of common stock with an exercise price of \$0.18 and 20.6 million shares of common stock. Since the combined fair value of the warrants and common stock issued as part of the Second NWPSA exceeded the face value of the note, the additional amount beyond the face value was recorded as a loss on issuance totaling \$3.4 million.

Interest is charged at the greater of the prime rate or 3% plus 9%. The principal increases at a rate of 3% of the outstanding principal balance (PIK interest) on each quarterly interest payment date. The original maturity date of the Senior Secured Note is September 20, 2025, and it can be prepaid.

As of June 30, 2023, the Company is in default on the minimum liquidity provisions in the Senior Secured Note and, as a result, it is classified in current liabilities in the accompanying condensed consolidated balance sheets. The Company is accruing interest at the default interest rate of an incremental 5%.

In June 2023, the Company entered into a Fourth Amendment to the NWPSA, which provides the Company an extension of the holder forbearing from exercising the remedies arising from the existing defaults to the earlier of the occurrence of an event of default and December 31, 2023. The amendment also added a consent fee of 2% of the original principal amount of the NWSPA, payable in cash at maturity, and defers interest that would otherwise have been due on June 30, 2023, and September 30, 2023. The interest will instead be compounded and added to the principal amount of the notes and bear interest at a rate of 20.25% per annum. The amendment also requires the Company to complete an equity financing that results in gross cash proceeds of at least \$2.5 million by July 15, 2023. This financing successfully closed after June 30, 2023, as further described in Note 14.

The debt issuance costs, and debt discount related to the Senior Secured Note were capitalized as a reduction in the principal amount and are being amortized to interest expense over the life of the Senior Secured Note. Interest expense for the three and six months ended June 30, 2023, totaled \$1.7 and \$3.3 million, respectively. Interest expense for the three and six months ended June 30, 2022, totaled \$0.7 and \$1.4 million, respectively.

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8. Convertible Promissory Notes Payable

The following two tables summarize outstanding notes payable as of June 30, 2023, and December 31, 2022:

As of June 30, 2023					
(In thousands, except conversion price)	Conversion Price	Principal	Remaining Debt Discount	Remaining Embedded Conversion Option	Carrying Value
Acquisition convertible promissory note, in default	\$ 0.10	4,000	-	-	4,000
Convertible promissory notes payable, related parties, in default	\$ 0.10	1,373	-	-	1,373
2022 convertible notes payable	\$ 0.04	14,193	(991)	510	13,712
2022 convertible notes payable, related parties	\$ 0.04	7,210	(420)	183	6,973
Total Convertible Promissory Notes Payable		\$ 26,776	\$ (1,411)	\$ 693	\$ 26,058

As of December 31, 2022					
(In thousands, except conversion price)	Conversion Price	Principal	Remaining Debt Discount	Remaining Embedded Conversion Option	Carrying Value
Acquisition convertible promissory note, in default	\$ 0.10	4,000	-	-	4,000
Convertible promissory note, related party, in default	\$ 0.10	1,373	-	-	1,373
2022 convertible notes payable	\$ 0.04	13,660	(2,532)	1,585	12,713
2022 convertible notes payable, related parties	\$ 0.04	6,515	(1,234)	755	6,036
Total Convertible Promissory Notes		\$ 25,548	\$ (3,766)	\$ 2,340	\$ 24,122

2022 Convertible Notes Payable and 2022 Convertible Notes Payable, Related Parties – In August 2022, November 2022, and May 2023, the Company entered into Securities Purchase Agreements (the “Purchase Agreements”), for the sale in a private placement of (i) Future Advance Convertible Promissory Notes (the “Notes”) in an aggregate principal amount of approximately \$16.2 million in August and approximately \$4.0 million in November, and approximately \$1.2 million in May (ii) Common Stock Purchase Warrants to purchase an additional 535.1 million shares of common stock with an exercise price of \$0.067 per share and (iii) Common Stock Purchase Warrants to purchase an additional 535.1 million shares of common stock with an exercise price of \$0.04 per share. Interest expense for the three and six months ended June 30, 2023, totaled \$2.4 million and \$4.6 million, respectively.

Pursuant to the Notes, the Company promised to pay in cash and/or in shares of common stock, at a conversion price of \$0.04 (the “Conversion Price”), the principal amount and interest at a rate of 15% per annum on any outstanding principal. The Conversion Price of the Notes is subject to adjustment, including if the Company issues or sells shares of common stock for a price per share less than the Conversion Price of the Notes or if the Company lists its shares of common stock on The Nasdaq Capital Market and the average volume weighted average price of such common stock for the five trading days preceding such listing is less than \$0.04 per share; provided, however, that the Conversion Price shall never be less than \$0.01. The Notes contain customary events of default and covenants, including limitations on incurrences of indebtedness and liens.

Pursuant to the Notes issued in August 2022 and November 2022, the Company agreed to reduce its outstanding shares via a reverse stock split to provide the number of authorized and unissued shares of common stock sufficient to permit the conversion of these Notes on or before December 31, 2022. However, the Company obtained a waiver of this requirement through December 31, 2023, from all holders of the August 2022 and November 2022 Notes and amended its Articles of Incorporation to increase its number of authorized shares of common stock from 800,000,000 to 2,500,000,000.

9. Bridge Notes Advance

As of June 30, 2023, the Company had received \$1.5 million in cash proceeds, as Bridge Notes Advances. The Company received \$0.6 million from related parties to fund operations. Funds received from non-related parties were held in Restricted Cash totaling \$0.9 million as disclosed in Note 5.

The Company was required to raise a total of \$2.5 million by July 15, 2023, as required by the conditions for the Fourth Amendment to the NWPSA. Upon meeting the required minimum, the \$1.5 million Bridge Notes Advance received as of June 30, 2023 was converted into the Asset-Backed Secured Promissory Notes with a principal balance totaling \$2.2 million, described in Note 14 upon the closing of the financing transaction in July 2023.

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10. Fair Value Measurements

The Company uses various inputs to measure the outstanding warrants and certain embedded conversion features associated with a convertible debt on a recurring basis to determine the fair value of the liabilities.

The following tables classify the Company's liabilities measured at fair value on a recurring basis into the fair value hierarchy:

(in thousands)	Fair value measured at June 30, 2023			
	Fair value at June 30, 2023	Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Warrant liability	\$ 14,410	\$ -	\$ -	\$ 14,410
Embedded conversion option	693	-	-	693
Total fair value	\$ 15,103	\$ -	\$ -	\$ 15,103

(in thousands)	Fair value measured at December 31, 2022			
	Fair value at December 31, 2022	Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Warrant liability	\$ 1,416	\$ -	\$ -	\$ 1,416
Embedded conversion option	2,340	-	-	2,340
Total fair value	\$ 3,756	\$ -	\$ -	\$ 3,756

There were no transfers among Levels 1, 2 or 3 during the three and six months ended June 30, 2023, and 2022. Both observable and unobservable inputs were used to determine the fair value of positions that the Company has classified within the Level 3 category. Unrealized gains and losses associated with liabilities within the Level 3 category include changes in fair value that were attributable to both observable (e.g. changes in market interest rates) and unobservable (e.g., changes in unobservable long-dated volatilities) inputs.

Warrant Liability

Significant inputs related to the Company's liability classified warrants are listed below.

	June 30, 2023	Initial Valuation May 2023	December 31, 2022
Weighted average remaining life in years	4.22	5.00	4.68
Weighted average volatility	103%	84%	92%
Value of underlying shares	\$ 0.022	\$ 0.019	\$ 0.005
Weighted average risk free interest rate	4.0%	3.5%	4.0%
Expected dividend yield	0.00%	0.00%	0.00%

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A summary of the warrant liability activity for the six months ended June 30, 2023, is as follows:

(in thousands, except per share data)	Warrants Outstanding	Fair Value per Share	Fair Value (in thousands)
Balance at December 31, 2022	1,066,857	\$ 0.06	\$ 1,416
Issuance	61,389	0.01	570
Loss on remeasurement of warrant liability	-		12,424
Balance at June 30, 2023	1,128,246	\$ 0.01	\$ 14,410

Embedded Conversion Option Liability

Certain convertible notes include a conversion option that meets the definition of a derivative liability and, accordingly, is required to be bifurcated. The fair value for the conversion option liability was determined using the Black Scholes method.

The fair value of conversion option liability assumptions for the periods ended below:

	June 30, 2023	Initial valuation May 2023	December 31, 2022
Conversion Price ⁽¹⁾	\$ 0.04	\$ 0.04	\$ 0.04
Value of underlying shares	\$ 0.022	\$ 0.019	\$ 0.005
Interest Rate (annual) ⁽²⁾	5.28%	4.70%	4.64%
Volatility (annual) ⁽³⁾	141.3%	114.1%	503.0%
Time to Maturity (Years)	0.39	1.00	0.60

(1) Based on the terms provided in the convertible promissory note agreements to convert to common stock of the Company

(2) Interest rate for U.S. Treasury Bonds, as of each presented period ending date, as published by the U.S. Federal Reserve.

(3) Based on a discounted historical daily volatility of the Company as of each presented period ending date.

A summary of the conversion option liability activity is as follows:

(in thousands)	Conversion Liability
Balance December 31, 2022	\$ 2,340
Initial value of new issuance	157
Change in fair value	(1,804)
Balance June 30, 2023	\$ 693

11. Revenue

The disaggregation of revenue is based on type and geographical region. The following table presents revenue from contracts with customers:

	Three Months Ended June 30, 2023			Three Months Ended June 30, 2022		
	United States	International	Total	United States	International	Total
Consumables and parts revenue	\$ 2,913	\$ 18	\$ 2,931	\$ 2,629	\$ 34	\$ 2,663
System revenue	1,323	79	1,402	862	-	862
License fees and other	75	5	80	8	5	13
Product Revenue	\$ 4,311	\$ 102	\$ 4,413	\$ 3,499	\$ 39	\$ 3,538
Rental Income	262	-	262	344	-	344
Total Revenue	\$ 4,573	\$ 102	\$ 4,675	\$ 3,843	\$ 39	\$ 3,882

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	Six Months Ended June 30, 2023			Six Months Ended June 30, 2022		
	United States	International	Total	United States	International	Total
Consumables and parts revenue	\$ 5,487	\$ 50	\$ 5,537	\$ 4,824	\$ 30	\$ 4,854
System revenue	2,157	115	2,272	1,491	16	1,507
License fees and other	81	15	96	14	14	28
Product Revenue	\$ 7,725	\$ 180	\$ 7,905	\$ 6,329	\$ 60	\$ 6,389
Rental Income	545	-	545	688	-	688
Total Revenue	\$ 8,270	\$ 180	\$ 8,450	\$ 7,017	\$ 60	\$ 7,077

12. Concentration of Credit Risk and Limited Suppliers

The Company currently purchases most of its product component materials from single suppliers and the loss of any of these suppliers could result in a disruption in the Company's production. The percentage of purchases from major vendors of the Company that exceeded ten percent of total purchases for the three and six months ended June 30, 2023, and 2022 were as follows:

	Three Months Ended		Six Months Ended	
	June 30, 2023	June 30, 2022	June 30, 2023	June 30, 2022
Purchases:				
Vendor A	13%	17%	17%	18%
Vendor B	16%	n/a	11%	n/a

13. Commitments and Contingencies

In the ordinary course of business, the Company from time to time becomes involved in various legal proceedings involving a variety of matters. The Company does not believe there are any pending legal proceedings that will have a material adverse effect on the Company's business, consolidated financial position, results of operations, or cash flows. However, the outcome of such legal matters is inherently unpredictable and subject to significant uncertainties. The Company's expenses legal fees in the period in which they are incurred.

Acquisition dispute – In May 2021, the Company received notification alleging that it is not in compliance with the license agreement with Celularity entered into in connection with the acquisition of the UltraMIST assets. The Company has responded and asserted that the Company is not in breach and that the supplier has breached various agreements. It is too early to determine the outcome of this matter. Any potential impact on the Company cannot be fully determined at this time and there is no guarantee that the dispute will be resolved in a manner beneficial to the Company.

14. Subsequent Events

Asset Backed Secured Promissory Notes

In July 2023, the Company issued Asset-Backed Secured Promissory Notes (the "ABL Notes") in an aggregate principal amount of \$4.6 million to certain accredited investors (the "Purchasers") at an original issue discount of 33.33%. The notes bear an interest rate of 0% per annum and mature on January 21, 2024 (the "Maturity Date"). The Company received total proceeds of approximately \$3.0 million. As of June 30, 2023, the Company received \$1.5 million in cash proceeds, of which \$0.6 million was from related parties.

The Company entered into a Security Agreement providing for a continuing and unconditional security interest in any and all property of the Company. This security interest is subordinate to the Senior Secured Debt described in Note 7.

The Company and the Purchasers also entered into a side letter pursuant to which the parties agreed that upon the Maturity Date, or upon a fundamental transaction as defined by the ABL Notes, the Company will issue each Purchaser (i) a Future Advance Convertible Promissory Note (the "Future Advance Convertible Promissory Note") with the same principal amount as the principal amount of such Purchasers' ABL Note, plus any accrued and unpaid interest and two Common Stock Purchase Warrants (the "Warrants"), with consistent terms as the convertible notes disclosed in Note 8.

Settlement of August Issued 2022 Convertible Promissory Notes

In August 2023, the Company utilized their election to convert the August issued 2022 Convertible Notes Payable into shares of common stock upon the notes' maturity. The \$16.2 million in principal and \$2.4 million in interest were converted to 464,440,813 shares of common stock.

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Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations together with our unaudited condensed consolidated financial statements and the related notes appearing elsewhere in this report, and together with our audited consolidated financial statements, related notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations" as of and for the year ended December 31, 2022 included in our Annual Report on Form 10-K, filed with the SEC on March 31, 2023 (the "2022 Annual Report").

Executive Summary

We continued to realize significant revenue growth during the three and six months ended June 30, 2023, as compared to the same periods in 2022. Revenue for the three months ended June 30, 2023, totaled \$4.7 million, an increase of 20%, as compared to \$3.9 million for the same period of 2022. Revenue for the six months ended June 30, 2023, totaled \$8.5 million, an increase of 19%, as compared to \$7.1 million for the same period of 2022.

Net loss for the three months ended June 30, 2023, was \$7.3 million, or \$0.01 per basic and diluted share, compared to a net income of \$1.6 million, or \$0.00 per basic and diluted share, for the same period in 2022. The increase in our net loss for the three months ended June 30, 2023, was primarily due to continued losses on the fair value of our derivatives, which totaled \$3.8 million of expense in the period. For the three months ended June 30, 2023, our operating income totaled \$0.9 million, which is an improvement of \$4.0 million compared to 2022, which aligns with our initiative to drive profitable growth and manage spend through 2023.

Net loss for the six months ended June 30, 2023, was \$20.3 million, or \$0.04 per basic and diluted share, compared to a net loss of \$3.5 million, or \$0.01 per basic and diluted share, for the same period in 2022. The increase in our net loss for the six months ended June 30, 2023, was primarily due to continued losses on the fair value of our derivatives, which totaled \$10.6 million of expense in the period. For the six months ended June 30, 2023, our operating loss totaled \$1.0 million, which is an improvement of \$4.0 million compared to the same period in 2022, which aligns with our initiative to drive profitable growth and manage spend through 2023.

Non-GAAP Financial Measures

Throughout this Management's Discussion and Analysis, we present certain financial measures that facilitate management's review of the operational performance of the Company and as a basis for strategic planning; however, such financial measures are not presented in our financial statements prepared in accordance with accounting principles generally accepted in the United States (U.S.) (U.S. GAAP). These financial measures are considered "non-GAAP financial measures" and are intended to supplement, and should not be considered as superior to, financial measures presented in accordance with U.S. GAAP.

The Company uses Earnings Before Interest, Taxes, Depreciation and Amortization ("EBITDA") and Adjusted EBITDA to assess its operating performance. Adjusted EBITDA is Earnings before Interest, Taxes, Depreciation and Amortization adjusted for the change in fair value of derivatives and any significant non-cash or non-recurring one-time charges. EBITDA and Adjusted EBITDA should not be considered as alternatives to net income as a measure of financial performance or any other performance measure derived in accordance with GAAP, and they should not be construed as an inference that our future results will be unaffected by unusual or non-recurring items. These non-GAAP financial measures are presented in a consistent manner for each period, unless otherwise disclosed. The Company uses these measures for the purpose of evaluating its historical and prospective financial performance, as well as its performance relative to competitors. The measure also helps the Company to make operational and strategic decisions. The Company believes that providing this information to investors, in addition to GAAP measures, allows them to see the Company's results through the eyes of Management, and to better understand its historical and future financial performance. These Non-GAAP financial measures are also frequently used by analysts, investors, and other interested parties to evaluate companies in our industry, when considered alongside other GAAP measures.

EBITDA and Adjusted EBITDA have their limitations as analytical tools, and you should not consider them in isolation or as a substitute for analysis of our results as reported under GAAP. Some of these limitations are that EBITDA and Adjusted EBITDA:

- Do not reflect every expenditure, future requirements for capital expenditures or contractual commitments.
- Do not reflect all changes in our working capital needs.
- Do not reflect the interest expense, or the amount necessary to service our outstanding debt.

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As presented in the GAAP to Non-GAAP Reconciliations section below, our non-GAAP financial measure excludes the impact of certain charges that contribute to our net loss (Non-GAAP Adjustments).

(in thousands)	Three months ended June 30,		Six months ended June 30,	
	2023	2022	2023	2022
Net (Loss)/Income	\$ (7,262)	\$ 1,644	\$ (20,342)	\$ (3,457)
Non-GAAP Adjustments:				
Interest expense	4,381	2,959	8,659	6,152
Depreciation and amortization	257	255	515	446
EBITDA	(2,624)	4,858	(11,168)	3,141
Non-GAAP Adjustments for Adjusted EBITDA:				
Change in fair value of derivative liabilities	3,821	(7,861)	10,618	(11,343)
Other non-cash or one-time charges:				
Release of historical accrued expenses	(1,250)	-	(1,250)	-
Shares for Services	224	888	224	888
Loss on issuance of debt	-	-	-	3,434
Loss on extinguishment of debt	-	211	-	211
Adjusted EBITDA	\$ 171	\$ (1,904)	\$ (1,576)	\$ (3,669)

Results of Operations

	For the Three Months Ended				For the Six Months Ended			
	June 30,		Change		June 30,		Change	
	2023	2022	\$	%	2023	2022	\$	%
Revenues:								
Total Revenue	\$ 4,675	\$ 3,882	\$ 793	20%	\$ 8,450	\$ 7,077	\$ 1,373	19%
Cost of Revenues	1,202	1,096	106	10%	2,464	1,986	478	24%
Gross Margin	3,473	2,786	687	25%	5,986	5,091	895	18%
Operating Expenses:								
General and administrative	1,238	3,781	(2,543)	-67%	3,997	5,986	(1,989)	-33%
Selling and marketing	978	1,672	(694)	-42%	2,390	3,387	(997)	-29%
Research and development	139	171	(32)	-19%	270	337	(67)	-20%
Operating Income (loss)	187	210	(23)	-11%	376	386	(10)	-3%
Operating Loss	931	(3,048)	3,979	-131%	(1,047)	(5,005)	3,958	-79%
Other Income (Expense), net	(8,193)	4,692	(12,885)	-275%	(19,295)	1,548	(20,843)	-1346%
Net (Loss) Income	\$ (7,262)	\$ 1,644	(8,906)	-542%	\$ (20,342)	\$ (3,457)	(16,885)	488%

Revenues and Gross Margin

Revenues for the three month-period ended June 30, 2023, were \$4.7 million compared to \$3.9 million for the same period of 2022, an increase of \$0.8 million, or 20%. The increase was primarily driven by the continued increased sales of our UltraMIST® system. Gross margin as a percentage of revenue increased to 74% during the three months ended June 30, 2023, from 72% in the same period of 2022. The increase in gross margin percentage for the three months ended June 30, 2023, was primarily driven by stronger pricing.

Revenues for the six months ended June 30, 2023, were \$8.5 million compared to \$7.1 million for the same period of 2022, an increase of \$1.4 million, or 19%. Gross margin as a percentage of revenue decreased to 71% for the six months ended June 30, 2023, from 72% in the same period in 2022. The decrease for the six months ended June 30, 2023, as compared to the same period in 2022, was primarily due to higher cost of production from our third-party manufacturers.

General and Administrative Expenses

General and administrative expenses decreased \$2.5 million or 67% for the three months ended June 30, 2023, compared with the same period of 2022. The decrease for the three months ended June 30, 2023, was primarily due to restructuring activities. General and administrative expenses decreased \$2.0 million or 33% for the six months ended June 30, 2023, compared to the same period in 2022. This decrease was primarily due to continued cost management activities and restructuring activities.

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Selling and Marketing Expenses

Selling and marketing expenses decreased by \$694 thousand or 42% for the three months ended June 30, 2023, as compared with the same period of 2022. Selling and marketing expenses decreased by \$997 thousand or 29% for the six months ended June 30, 2023, as compared with the same period of 2022. The decreases were primarily due to a reduction in sales headcount during 2023 and other cost management activities.

Research and Development Expenses

Research and development expenses decreased \$32 thousand or 19% for the three months ended June 30, 2023, as compared with the same period of 2022. Research and development expenses as a percentage of revenue decreased from 4% during the three months ended June 30, 2022, to 3% for the same period in 2023. The decrease was primarily due to improved cost management in 2023.

Research and development expenses decreased \$67 thousand or 20% for the six months ended June 30, 2023, as compared with the same period of 2022. Research and development expenses as a percentage of revenue decreased from 5% during the six months ended June 30, 2022, to 3% for the same period in 2023. The decrease was primarily due to improved cost management in 2023.

Other Income (Expense), net

	For the three months ended June 30,		Change		For the six months ended June 30,		Change	
	2023	2022	\$	%	2023	2022	\$	%
Interest expense	\$ (4,381)	\$ (2,959)	\$ (1,422)	48%	\$ (8,659)	\$ (6,152)	\$ (2,507)	41%
Change in fair value of derivatives	(3,821)	7,861	(11,682)	-149%	(10,618)	11,343	(21,961)	-194%
Loss on issuance of debt	-	-	-	nm	-	(3,434)	3,434	nm
Loss on extinguishment of debt	-	(211)	211	nm	-	(211)	211	nm
Other expense	9	1	8	nm	(18)	2	(20)	nm
Other (expense)/income, net	\$ (8,193)	\$ 4,692	\$ (12,885)	-275%	\$ (19,295)	\$ 1,548	\$ (20,843)	-1346%

nm - not meaningful

Other expense, net increased by \$12.9 million to \$8.2 million for the three months ended June 30, 2023, as compared to the same period for 2022. Other expense, net increased \$20.8 million to \$19.3 million for the six months ended June 30, 2023, as compared to the same period for 2022. These increases were primarily due to increased convertible promissory notes outstanding from the transactions executed during 2022 and an increased change in the fair value of warrants and their embedded conversion liabilities.

Liquidity and Capital Resources

Since inception, we have incurred losses from operations each year. As of June 30, 2023, we had an accumulated deficit of \$215 million. Historically, our operations have primarily been funded from the sale of capital stock, notes payable, and convertible debt securities. The recurring losses from operations, the events of default on our notes payable, and dependency upon future issuances of equity or other financing to fund ongoing operations have raised substantial doubt as to our ability to continue as a going concern for a period of at least twelve months from the filing of this Form 10-Q. We expect to devote substantial resources for the commercialization of UltraMIST and PACE systems which will require additional capital resources to remain a going concern.

Management's plans are to obtain additional capital in 2023 through the conversion of outstanding warrants, issuance of common or preferred stock, securities convertible into common stock, or secured or unsecured debt. These possibilities, to the extent available, may be on terms that result in significant dilution to our existing stockholders. In addition, there can be no assurances that our plans to obtain additional capital will be successful on the terms or timeline we expect, or at all. If these efforts are unsuccessful, we may be required to significantly curtail or discontinue operations or, if available, obtain funds through financing transactions with unfavorable terms.

(in Thousands)	For the six months ended June 30,	
	2023	2022
Cash flows used by operating activities	\$ (1,215)	\$ (5,201)
Cash flows (used by) provided by investing activities	\$ (169)	\$ 948
Cash flows provided by financing activities	\$ 1,426	\$ 5,104

Cash used in operating activities during the six months ended June 30, 2023, totaled \$1.2 million as compared to \$5.2 million in the previous period. This improvement in cash used in operations aligns with our approach to drive profitable growth and manage costs.

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Cash provided by financing activities of \$1.4 million for the six months ended June 30, 2023, was primarily due to new convertible lending activities to fund our growth. Cash provided by financing activities for the six months ended June 30, 2022, consisted primarily of \$5.0 million received from our senior lender.

Critical Accounting Policies and Estimates

We have used various accounting policies to prepare the consolidated financial statements in accordance with U.S. GAAP. Our significant accounting policies are disclosed in Note 4 to the consolidated financial statements in Part II Item 8. "Financial Statements and Supplementary Data" in our Annual Report on Form 10-K filed with the SEC on March 31, 2023.

The preparation of the condensed consolidated financial statements, in conformity with U.S. GAAP, requires us to use judgment in making estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, and expenses. These estimates reflect our best judgment about economic and market conditions and the potential effects on the valuation and/or carrying value of assets and liabilities based upon relevant information available. We base our estimates on historical experience and on various assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources.

The following accounting policies and estimates are deemed critical:

Litigation Contingencies

We may be involved in legal actions involving product liability, intellectual property and commercial disputes, tax disputes, and governmental proceedings and investigations. The outcomes of these legal actions are not completely within our control and may not be known for prolonged periods of time. In some actions, the enforcement agencies or private claimants seek damages that could require significant expenditures or result in lost revenues or limit our ability to conduct business in the applicable jurisdictions. Estimating probable losses from our litigation and governmental proceedings is inherently difficult, particularly when the matters are in early procedural stages, with incomplete scientific facts or legal discovery; involve unsubstantiated or indeterminate claims for damages; potentially involve penalties, fines, or punitive damages; or could result in a change in business practice. The Company records a liability in the condensed consolidated financial statements for loss contingencies when a loss is known or considered probable, and the amount may be reasonably estimated. If the reasonable estimate of a known or probable loss is a range, and no amount within the range is a better estimate than any other, the minimum amount of the range is accrued. If a loss is reasonably possible but not known or probable, and may be reasonably estimated, the estimated loss or range of loss is disclosed. Our significant legal proceedings are discussed in Note 11 to the condensed consolidated financial statements.

Derivative Liabilities from Embedded Conversion Options and Warrants

The Company classified certain convertible instruments as having embedded conversion options which qualified as derivative financial instruments to be separately accounted for. The Company also determined that certain warrants also qualified as derivative financial instruments. Various valuations models were used to estimate the fair value of these derivative financial instruments that are classified as derivative liabilities on the condensed consolidated balance sheets. The models include subjective input assumptions that can materially affect the fair value estimates and as such are subject to uncertainty. The material assumptions for the selected subjective inputs have not changed for the reporting period, except for the expected volatility, which is estimated based on the actual volatility during the most recent historical period equal to the remaining life of the instruments.

Valuation of Intangible Assets and Goodwill

When we acquire a business, the assets acquired, and liabilities assumed are recorded at their respective fair values on the acquisition date. Goodwill is the excess of the purchase price over the estimated fair value of net assets of acquired businesses. Intangible assets primarily include patents, trademarks, and customer relationships. Determining the fair value of intangible assets acquired as part of a business combination requires us to make significant estimates. These estimates include the amount and timing of projected future cash flows of each project or technology, the discount rate used to discount those cash flows to present value, and the assessment of the asset's life cycle. The estimates could be impacted by legal, technical, regulatory, economic, and competitive risks. The test for impairment of goodwill requires us to make several estimates to determine the fair value of the goodwill. Our estimates associated with the goodwill impairment test are considered critical due to the amount of goodwill recorded on our condensed consolidated balance sheets and the judgment required in determining fair value. We assess the impairment of goodwill at the consolidated level annually. We also test definite-lived intangible assets for impairment when an event occurs, or circumstances change that would indicate the carrying amount of the assets or asset group may be impaired. Our assessment for goodwill and intangible assets impairment is based on future cash flows that require significant judgment with respect to future revenue and expense growth rates and other assumptions and estimates. We use estimates that are consistent with the highest and best use of the assets based on a market participant's view of the assets being evaluated. Actual results may differ from our estimates due to several factors including, among others, changes in competitive conditions, regulatory changes, results of clinical trials, and changes in worldwide economic conditions.

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Segment and Geographic Information

We have determined that we have one operating segment. Our revenues are generated from sales primarily in the United States. International sales include sales in Europe, Canada, the Middle East, Central America, South America, Asia, and Asia/Pacific. All significant expenses are generated in the United States and all significant assets are in the United States.

Effects of Inflation

Our assets are, to an extent, liquid in nature, they are not significantly affected by inflation. However, the rate of inflation, which has increased, affects expenses such as employee compensation, office space leasing costs and research and development charges, which may not be readily recoverable during the period that we are bringing the product candidates to market. To the extent inflation results in rising interest rates and has other adverse effects on the market, it may adversely affect our consolidated financial condition and results of operations.

Item 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

As a “smaller reporting company” as defined by Item 10 of Regulation S-K, we are not required to provide the information required under this item.

Item 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures, as defined in Rule 13a-15(e) and 15d-15(e) promulgated under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), that are designed to provide reasonable assurance that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the Company’s management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

We carried out an evaluation under the supervision and with the participation of our management, including our Chief Executive Officer (principal executive officer) and Chief Financial Officer (principal financial officer and accounting officer), of the effectiveness of the design and operation of our disclosure controls and procedures as of June 30, 2023. Based on this evaluation, the Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were not operating effectively as of June 30, 2023. Our disclosure controls and procedures were not effective because of the “material weakness” described below.

As of June 30, 2023, the Company has still identified the following material weaknesses:

1. Expertise and resources to analyze and properly apply U.S. GAAP to complex and non-routine transactions such as complex financial instruments and derivatives and complex sales distributing agreements with select vendors.
2. A lack of internal resources to analyze and properly apply U.S. GAAP to accounting for financial instruments included in service agreements with select vendors.
3. The Company has failed to design and implement controls around all accounting and IT processes and procedures and, as such, we believe that all its accounting and IT processes and procedures need to be re-designed and tested for operating effectiveness.

As a result, management concluded that its internal control over reporting was not effective as of June 30, 2023.

Remediation Plan

We are working with an external vendor to properly document our current internal control policies and procedures to provide the framework for increased effectiveness to test internal controls going forward. We are also adding automated and manual controls into and over the Company’s enterprise resource planning (“ERP”) system to ensure that order to cash controls are implemented to mitigate the risk in customer creation, pricing, and accuracy of billing. We will continue to work with our external vendor to remediate the weaknesses noted above.

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We are also working with an outside vendor to improve our IT general controls over our ERP system and set up a proper framework for IT general controls to be executed with the objective to remediate the weaknesses regarding internal controls and provide the framework for testing going forward.

In 2022, we hired internal resources with the proper expertise and experience to apply U.S. GAAP. With the passage of time and implementation of additional policies, procedures, and controls, we believe the framework for a proper internal control environment will begin to remediate our material weaknesses.

While the above actions and planned actions are subject to ongoing management evaluation and will require validation and testing of the design and operating effectiveness of internal control over a sustained period, we are committed to continuous improvement and will continue to diligently review our internal control over financial reporting. The material weaknesses will not be considered remediated until management completes the design and implementation of the measures described above, until the controls operate for a sufficient period, and until management has concluded, through testing, that the controls are effective.

There is no assurance that the measures described above will be sufficient to remediate the previously identified material weaknesses and significant deficiencies.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting that occurred during the quarter ended June 30, 2023, that materially affect, or are reasonably likely to materially affect, our internal control over financial reporting, except as disclosed in "Remediation Plan" above.

PART II — OTHER INFORMATION

Item 1. LEGAL PROCEEDINGS.

For information regarding legal proceedings at June 30, 2023, see Note 13 to the condensed consolidated financial statements, which information is incorporated herein by reference.

Item 1A. RISK FACTORS.

There have been no material changes from our risk factors as previously reported in Part I, Item 1A "Risk Factors – Risks Related to Our Business" in our 2022 Annual Report.

Item 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS.

The Company issued 6 million shares to consultants during the three months ended June 30, 2023, for services provided to the Company.

Item 3. DEFAULTS UPON SENIOR SECURITIES.

Not applicable.

Item 4. MINE SAFETY DISCLOSURES.

Not applicable.

Item 5. OTHER INFORMATION.

During the three months ended June 30, 2023, none of our directors or officers (as defined in Rule 16a-1(f) of the Exchange Act) adopted or terminated any contract, instruction or written plan for the purchase or sale of our securities that was intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) of the Exchange Act or any non-Rule 10b5-1 trading arrangement (as defined in the SEC's rules).

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Item 6. EXHIBITS

<u>Exhibit No.</u>	<u>Description</u>
3.1	Articles of Incorporation (Incorporated by reference to Exhibit 3.1 to the Form 10-SB filed with the SEC on December 18, 2007).
3.2	Certificate of Amendment to the Articles of Incorporation (Incorporated by reference to Appendix A to the Definitive Schedule 14C filed with the SEC on October 16, 2009).
3.3	Certificate of Amendment to the Articles of Incorporation (Incorporated by reference to Exhibit A to the Definitive Schedule 14C filed with the SEC on April 16, 2012).
3.4	Bylaws (Incorporated by reference to Exhibit 3.02 to the Form 10-SB filed with the SEC on December 18, 2007).
3.5	Certificate of Designation of Preferences, Rights and Limitations of Series A Convertible Preferred Stock of the Company dated March 14, 2014 (Incorporated by reference to Exhibit 3.1 to the Form 8-K filed with the SEC on March 18, 2014).
3.6	Certificate of Amendment to the Articles of Incorporation, dated September 8, 2015 (Incorporated by reference to Exhibit 3.6 to the Form 10-K filed with the SEC on March 30, 2016).
3.7	Preferred Stock of the Company dated January 12, 2016 (Incorporated by reference to Exhibit 3.1 to the Form 8-K filed with the SEC on January 19, 2016).
3.8	Preferred Stock of the Company dated January 31, 2020 (Incorporated by reference to Exhibit 3.1 to the Form 8-K filed with the SEC on February 6, 2020).
3.9	Certificate of Designation of Preferences, Rights and Limitations of Series C Convertible Preferred Stock of the Company dated January 31, 2020 (Incorporated by reference to Exhibit 3.1 to the Form 8-K filed with the SEC on February 6, 2020).
3.10	Certificate of Designation of Series D Convertible Preferred Stock (Incorporated by reference to Exhibit 3.1 to the Form 8-K filed with the SEC on May 20, 2020).
3.11	Certificate of Amendment of the Articles of Incorporation (Incorporated by reference to Exhibit 3.1 to the Form 8-K filed with the SEC on January 5, 2021).
3.12	Certificate of Amendment of the Articles of Incorporation, dated January 31, 2023 (Incorporated by reference to Exhibit 3.12 to the Form S-1/A filed with the SEC on January 31, 2023).
4.1	Form of Future Advance Convertible Promissory Note issued to certain purchasers, dated May 9, 2023 (Incorporated by reference to Exhibit 4.1 to the Form S-1 filed with the SEC on June 30, 2023).
4.2	Form of Common Stock Purchase Warrant issued to certain purchasers, dated May 9, 2023 (Incorporated by reference to Exhibit 4.2 to the Form S-1 filed with the SEC on June 30, 2023).
4.3	Form of Asset-Backed Secured Promissory Note issued to certain purchasers, dated July 21, 2023 (Incorporated by reference to Exhibit 4.1 to the Form 8-K filed with the SEC on July 26, 2023).
10.1	Executive Employment Agreement, effective May 23, 2023, by and between the Company and Morgan Frank (Incorporated by reference to Exhibit 10.1 to the Form 8-K filed with the SEC on May 30, 2023).
10.2	Transition and Separation Agreement, dated May 23, 2023, by and between the Company and Kevin A. Richardson, II (Incorporated by reference to Exhibit 10.2 to the Form 8-K filed with the SEC on May 30, 2023).
10.3	Fourth Amendment to Note and Warrant Purchase and Security Agreement, dated June 23, 2023, by and among the Company, the noteholder party thereto and NH Expansion Credit Fund Holdings LP, as agent (Incorporated by reference to Exhibit 10.1 to the Form 8-K filed with the SEC on June 29, 2023).
10.4	Securities Purchase Agreement, dated May 9, 2023, by and among the Company and the purchasers identified on the signature pages thereto (Incorporated by reference to Exhibit 10.72 to the Form S-1 filed with the SEC on June 30, 2023).
10.5	Subordination Agreement, dated May 9, 2023, by and among the Company, NH Expansion Credit Fund Holdings LP and certain creditors (Incorporated by reference to Exhibit 10.73 to the Form S-1 filed with the SEC on June 30, 2023).
10.6	Security Agreement, dated May 9, 2023, by and among the Company and certain lenders (Incorporated by reference to Exhibit 10.74 to the Form S-1 filed with the SEC on June 30, 2023).
10.7	Registration Rights Agreement, dated May 9, 2023, by and among the Company and certain lenders (Incorporated by reference to Exhibit 10.75 to the Form S-1 filed with the SEC on June 30, 2023).
10.8	Security Agreement, dated July 21, 2023, by and among the Company and certain lenders (Incorporated by reference to Exhibit 10.1 to the Form 8-K filed with the SEC on July 26, 2023).

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10.9	Subordination Agreement, dated July 21, 2023, by and among the Company, NH Expansion Credit Fund Holdings LP and certain creditors (Incorporated by reference to Exhibit 10.2 to the Form 8-K filed with the SEC on July 26, 2023).
10.10	Side Letter, dated July 21, 2023, by and among the Company and certain purchasers (Incorporated by reference to Exhibit 10.3 to the Form 8-K filed with the SEC on July 26, 2023).
31.1*	Rule 13a-14(a)/15d-14(a) Certification of the Chief Executive Officer.
31.2*	Rule 13a-14(a)/15d-14(a) Certification of the Chief Financial Officer.
32.1*	Section 1350 Certification of the Principal Executive Officer.
32.2*	Section 1350 Certification of the Chief Financial Officer.
101.INS*	XBRL Instance.
101.SCH*	XBRL Taxonomy Extension Schema.
101.CAL*	XBRL Taxonomy Extension Calculation.
101.DEF*	XBRL Taxonomy Extension Definition.
101.LAB*	XBRL Taxonomy Extension Labels.
101.PRE*	XBRL Taxonomy Extension Presentation.
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).

*Filed herewith.

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SIGNATURES

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

SANUWAVE HEALTH, INC.

Dated: August 10, 2023

By: /s/ Morgan Frank
Morgan Frank
Chief Executive Officer
(Duly Authorized Officer and Principal Executive Officer)

Dated: August 10, 2023

By: /s/ Toni Rinow
Toni Rinow
Chief Financial Officer
(Principal Financial and Accounting Officer)

**Certification of Principal Executive Officer
Pursuant to Rule 13a-14(a) or Rule 15d-14(a)
Under the Securities Exchange Act of 1934**

I, Morgan Frank, certify that:

1. I have reviewed this quarterly report on Form 10-Q of SANUWAVE Health, 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 Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth 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.

Date: August 10, 2023

/s/ Morgan Frank
Morgan Frank
Chief Executive Officer
(Principal Executive Officer)

**Certification of Chief Financial Officer
Pursuant to Rule 13a-14(a) or Rule 15d-14(a)
Under the Securities Exchange Act of 1934**

I, Toni Rinow, certify that:

1. I have reviewed this quarterly report on Form 10-Q of SANUWAVE Health, 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 Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth 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.

Date: August 10, 2023

/s/ Toni Rinow

Toni Rinow
Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)

**CERTIFICATION PURSUANT TO SECTION 906 OF THE SARBANES OXLEY ACT OF 2002
(18 U.S.C. SECTION 1350)**

In connection with the quarterly report of SANUWAVE Health, Inc. (the "Company") on Form 10-Q for the period ended June 30, 2023 as filed with the Securities and Exchange Commission (the "Report"), I, Morgan Frank, Chief Executive Officer of the Company, hereby certify as of the date hereof, solely for purposes of Title 18, Chapter 63, Section 1350 of the United States Code, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d), as applicable, 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 at the dates and for the periods indicated.

Date: August 10, 2023

/s/ Morgan Frank
Morgan Frank
Chief Executive Officer
(Principal Executive Officer)

**CERTIFICATION PURSUANT TO SECTION 906 OF THE SARBANES OXLEY ACT OF 2002
(18 U.S.C. SECTION 1350)**

In connection with the quarterly report of SANUWAVE Health, Inc. (the "Company") on Form 10-Q for the period ended June 30, 2023 as filed with the Securities and Exchange Commission (the "Report"), I, Toni Rinow, Chief Financial Officer of the Company, hereby certify as of the date hereof, solely for purposes of Title 18, Chapter 63, Section 1350 of the United States Code, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d), as applicable, 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 at the dates and for the periods indicated.

Date: August 10, 2023

/s/ Toni Rinow

Toni Rinow

Chief Financial Officer

(Principal Financial Officer and Principal Accounting Officer)