

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

FORM 10-Q

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended September 30, 2024

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 001-35312

NUWELLIS, INC.

(Exact Name of Registrant as Specified in its Charter)

Delaware
(State or Other Jurisdiction of
Incorporation or Organization)

No. 68-0533453
(I.R.S. Employer
Identification No.)

12988 Valley View Road, Eden Prairie, MN 55344
(Address of Principal Executive Offices) (Zip Code)

(952) 345-4200
(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
Common Stock, par value \$0.0001 per share	NUWE	Nasdaq Capital Market

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, a 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
Emerging growth company

Accelerated filer
Smaller reporting 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

The number of outstanding shares of the registrant's common stock, \$0.0001 par value, as of November 8, 2024, was 4,373,968.

TABLE OF CONTENTS

Page Number

PART I—FINANCIAL INFORMATION

Item 1	Financial Statements	3
	Condensed Consolidated Balance Sheets	3
	Condensed Consolidated Statements of Operations	4
	Condensed Consolidated Statements of Stockholders' Equity (Deficit)	5
	Condensed Consolidated Statements of Cash Flows	6
	Notes to Condensed Consolidated Financial Statements	7
Item 2	Management's Discussion and Analysis of Financial Condition and Results of Operations	18
Item 3	Quantitative and Qualitative Disclosures About Market Risk	27
Item 4	Controls and Procedures	27

PART II—OTHER INFORMATION

Item 1	Legal Proceedings	27
Item 1A	Risk Factors	27
Item 2	Unregistered Sales of Equity Securities and Use of Proceeds	30
Item 3	Defaults Upon Senior Securities	31
Item 4	Mine Safety Disclosures	31
Item 5	Other Information	31
Item 6	Exhibits	31

PART I—FINANCIAL INFORMATION
ITEM 1. FINANCIAL STATEMENTS
NUWELLIS, INC. AND SUBSIDIARY
Condensed Consolidated Balance Sheets
(in thousands, except share and per share amounts)

	September 30, 2024	December 31, 2023
	(Unaudited)	
ASSETS		
Current assets		
Cash and cash equivalents	\$ 1,907	\$ 3,800
Accounts receivable	1,293	1,951
Inventories, net	1,864	1,997
Other current assets	430	461
Total current assets	5,494	8,209
Property, plant and equipment, net	551	728
Operating lease right-of-use asset	563	713
Other assets	120	120
TOTAL ASSETS	\$ 6,728	\$ 9,770
LIABILITIES, CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY (DEFICIT)		
Current liabilities		
Accounts payable and accrued liabilities	\$ 1,822	\$ 2,380
Accrued compensation	597	525
Current portion of operating lease liability	232	216
Other current liabilities	50	51
Total current liabilities	2,701	3,172
Common stock warrant liability	480	2,843
Operating lease liability	368	544
Total liabilities	3,549	6,559
Commitments and contingencies		
Mezzanine Equity		
Series J Convertible Preferred Stock as of September 30, 2024 and December 31, 2023, par value \$0.0001 per share; authorized 600,000 shares, issued and outstanding 95 and 11,950, respectively	2	221
Stockholders' equity		
Series A junior participating preferred stock as of September 30, 2024 and December 31, 2023, par value \$0.0001 per share; authorized 30,000 shares, none outstanding	—	—
Series F convertible preferred stock as of September 30, 2024 and December 31, 2023, par value \$0.0001 per share; authorized 18,000 shares, issued and outstanding 127 shares	—	—
Preferred stock as of September 30, 2024 and December 31, 2023, par value \$0.0001 per share; authorized 39,352,000 shares, none outstanding	—	—
Common stock as of September 30, 2024 and December 31, 2023, par value \$0.0001 per share; authorized 100,000,000 shares, issued and outstanding 1,866,890 and 162,356, respectively	—	—
Additional paid-in capital	300,546	290,647
Accumulated other comprehensive income:		
Foreign currency translation adjustment	(46)	(31)
Accumulated deficit	(297,323)	(287,626)
Total stockholders' equity	3,177	2,990
TOTAL LIABILITIES, CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY	\$ 6,728	\$ 9,770

See notes to the condensed consolidated financial statements.

NUWELLIS, INC. AND SUBSIDIARY
Condensed Consolidated Statements of Operations and Comprehensive Loss
(Unaudited)
(in thousands, except per share amounts and weighted average shares outstanding)

	Three months ended September 30		Nine months ended September 30	
	2024	2023	2024	2023
Net sales	\$ 2,367	\$ 2,412	\$ 6,418	\$ 6,313
Cost of goods sold	711	1,031	2,097	2,718
Gross profit	<u>1,656</u>	<u>1,381</u>	<u>4,321</u>	<u>3,595</u>
Operating expenses:				
Selling, general and administrative	2,702	3,428	10,544	13,582
Research and development	486	1,117	2,378	4,050
Total operating expenses	<u>3,188</u>	<u>4,545</u>	<u>12,922</u>	<u>17,632</u>
Loss from operations	(1,532)	(3,164)	(8,601)	(14,037)
Other income (expense), net	8	(204)	(87)	98
Financing Expense	—	—	(5,607)	—
Change in fair value of warrant liability	3,882	—	4,602	(755)
Income (loss) before income taxes	2,358	(3,368)	(9,693)	(14,694)
Income tax expense	—	(2)	(4)	(6)
Net income (loss)	<u>\$ 2,358</u>	<u>\$ (3,370)</u>	<u>\$ (9,697)</u>	<u>\$ (14,700)</u>
Deemed dividend attributable to Series J Convertible Preferred Stock	—	—	541	—
Net income (loss) attributable to common shareholders	<u>\$ 2,358</u>	<u>\$ (3,370)</u>	<u>\$ (9,156)</u>	<u>\$ (14,700)</u>
Basic and diluted net income (loss) per share	<u>\$ 1.74</u>	<u>\$ (63.27)</u>	<u>\$ (14.99)</u>	<u>\$ (357.42)</u>
Weighted average shares outstanding – basic and diluted	1,351,939	53,265	647,079	41,128
Other comprehensive loss:				
Foreign currency translation adjustments	\$ (4)	\$ —	\$ (15)	\$ (6)
Total comprehensive income (loss)	<u>\$ 2,354</u>	<u>\$ (3,370)</u>	<u>\$ (9,171)</u>	<u>\$ (14,706)</u>

See notes to the condensed consolidated financial statements.

NUWELLIS, INC. AND SUBSIDIARY
Condensed Consolidated Statements of Stockholders' Equity
(Unaudited)
(in thousands, except share amounts)

	Outstanding Shares of Common Stock	Common Stock	Additional Paid in Capital	Accumulated Other Comprehensive Income	Accumulated Deficit	Stockholders' Equity
Balance December 31, 2022	15,326	\$ —	\$ 279,736	\$ 38	\$ (267,417)	\$ 12,357
Net loss	—	—	—	—	(6,485)	(6,485)
Unrealized foreign currency translation adjustment	—	—	—	(7)	—	(7)
Unrealized gain on marketable securities	—	—	—	6	—	6
Stock-based compensation	—	—	181	—	—	181
Issuance costs related to 2022 common stock offering	—	—	(11)	—	—	(11)
Conversion of preferred stock into common stock	300	—	—	—	—	—
Reclassification of warrants to equity	—	—	7,623	—	—	7,623
Conversion of warrants into common stock	18,858	—	—	—	—	—
Balance March 31, 2023	34,484	\$ —	\$ 287,529	\$ 37	\$ (273,902)	\$ 13,664
Net loss	—	—	—	—	(4,845)	(4,845)
Unrealized gain on marketable securities	—	—	—	(61)	—	(61)
Stock-based compensation	—	—	197	—	—	197
Issuance costs related to ATM offering	—	—	(98)	—	—	(98)
Issuance of common stock from ATM offering	18,781	—	2,217	—	—	2,217
Balance June 30, 2023	53,265	\$ —	\$ 289,845	\$ (24)	\$ (278,747)	\$ 11,074
Net loss	—	—	—	—	(3,370)	(3,370)
Stock-based compensation	—	—	135	—	—	135
Balance September 30, 2023	53,265	\$ —	\$ 289,980	\$ (24)	\$ (282,117)	\$ 7,839
	Outstanding Shares of Common Stock	Common Stock	Additional Paid in Capital	Accumulated Other Comprehensive Income	Accumulated Deficit	Stockholders' Equity
Balance December 31, 2023	162,356	\$ —	\$ 290,647	\$ (31)	\$ (287,626)	\$ 2,990
Net loss	—	—	—	—	(4,330)	(4,330)
Unrealized foreign currency translation adjustment	—	—	—	(9)	—	(9)
Stock-based compensation, net	—	—	158	—	—	158
Issuance of common stock from conversion of series J convertible preferred stock	31,971	—	1,535	—	—	1,535
Series J convertible preferred stock deemed dividend	—	—	541	—	—	541
Balance March 31, 2024	194,327	\$ —	\$ 292,881	\$ (40)	\$ (291,956)	\$ 885
Net loss	—	—	—	—	(7,725)	(7,725)
Unrealized foreign currency translation adjustment	—	—	—	(2)	—	(2)
Stock-based compensation, net	—	—	115	—	—	115
Issuance of common stock, net	321,417	—	(109)	—	—	(109)
Balance June 30, 2024	515,744	\$ —	\$ 292,887	\$ (42)	\$ (299,681)	\$ (6,836)
Net loss	—	—	—	—	2,358	2,358
Unrealized foreign currency translation adjustment	—	—	—	(4)	—	(4)
Stock-based compensation, net	—	—	101	—	—	101
Issuance of common stock net	952,658	—	2,882	—	—	2,882
Exercise of common stock warrants	398,488	—	1,182	—	—	1,182
Issuance costs	—	—	(722)	—	—	(722)
Deemed dividend	—	—	(1)	—	—	(1)
Reclassification of April 2024 warrants to equity	—	—	4,217	—	—	4,217
Balance September 30, 2024	1,866,890	\$ —	\$ 300,546	\$ (46)	\$ (297,323)	\$ 3,177

See notes to the condensed consolidated financial statements.

NUWELLIS, INC. AND SUBSIDIARY
Condensed Consolidated Statements of Cash Flows
(Unaudited)
(in thousands)

	Nine months ended	
	September 30	
	2024	2023
Operating Activities:		
Net loss	\$ (9,697)	\$ (14,700)
Adjustments to reconcile net loss to cash flows used in operating activities:		
Depreciation and amortization	227	253
Stock-based compensation expense	374	513
Change in fair value of warrant liability	(4,602)	755
Warrant financing costs	5,607	—
Net realized gain on marketable securities	—	(65)
Changes in operating assets and liabilities:		
Accounts receivable	658	(19)
Inventory, net	120	325
Other current assets	(275)	(551)
Other assets and liabilities	(13)	(16)
Accounts payable and accrued expenses	(486)	(1,678)
Net cash used in operating activities	(8,087)	(15,183)
Investing Activities:		
Proceeds from sale of marketable securities	—	578
Additions to intangible assets	—	(99)
Purchases of property and equipment	(37)	(185)
Net cash provided by (used in) investing activities	(37)	294
Financing Activities:		
Issuance of common stock from offering	2,403	—
Proceeds from the exercise of Series J Convertible Preferred Warrants	501	—
Proceeds from the exercise of April 2024 Warrants	1,182	—
Issuance of July and August 2024 Common Stock and Warrants	2,160	—
Proceeds from ATM stock offerings, net	—	2,108
Payments on finance lease liability	—	(20)
Net cash provided by financing activities	6,246	2,088
Effect of exchange rate changes on cash	(15)	(6)
Net decrease in cash and cash equivalents	(1,893)	(12,807)
Cash and cash equivalents - beginning of period	3,800	17,737
Cash and cash equivalents - end of period	\$ 1,907	\$ 4,930
Supplemental cash flow information		
Non-cash impact of conversion of warrants to common stock	\$ —	\$ 6,868
Reclassification of April 2024 warrants to equity	\$ 4,217	\$ —
Issuance of Series J Preferred Stock for exercise of warrants	\$ 1,857	\$ —
Issuance of Common Stock for conversion of Series J Preferred Stock	\$ 1,535	\$ —
Deemed dividend on Series J Preferred Stock	\$ 541	\$ —

See notes to the condensed consolidated financial statements.

NUWELLIS, INC. AND SUBSIDIARY
Notes to Condensed Consolidated Financial Statements
(Unaudited)

Note 1 – Nature of Business and Basis of Presentation

Nature of Business: Nuwellis, Inc. (the “Company”) is a medical device company focused on developing, manufacturing, and commercializing the Aquadex FlexFlow® and Aquadex SmartFlow® systems (collectively, the “Aquadex System”) for ultrafiltration therapy. The Aquadex System is indicated for temporary (up to eight hours) or extended (longer than 8 hours in patients who require hospitalization) use in adult and pediatric patients weighing 20 kg. or more whose fluid overload is unresponsive to medical management, including diuretics. Nuwellis, Inc. is a Delaware corporation headquartered in Minneapolis with a wholly owned subsidiary in Ireland. The Company’s common stock began trading on the Nasdaq Capital Market in February 2012.

In August 2016, the Company acquired the business associated with the Aquadex System (the “Aquadex Business”) from a subsidiary of Baxter International, Inc. (“Baxter”), and refocused its strategy to fully devote its resources to the Aquadex Business. On April 27, 2021, the Company announced that it was changing its name from CHF Solutions, Inc. to Nuwellis, Inc. to reflect the expansion of its customer base from treating fluid imbalance resulting from congestive heart failure to also include critical care and pediatric applications.

Principles of Consolidation: The accompanying condensed consolidated balance sheet as of December 31, 2023, which has been derived from the consolidated audited financial statements, and the unaudited condensed consolidated financial statements 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 of Regulation S-X. Certain information and note disclosures normally included in the audited annual consolidated financial statements have been condensed or omitted pursuant to those rules and regulations. Accordingly, they do not include all of the information necessary for a fair presentation of results of operations, comprehensive loss, financial condition, and cash flows in conformity with U.S. GAAP. In the opinion of management, the condensed consolidated financial statements reflect all adjustments (consisting of normal recurring adjustments) considered necessary for a fair presentation of the results of the Company for the periods presented. Operating results for interim periods are not necessarily indicative of results that may be expected for the year as a whole. The preparation of the consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, expenses, and the related disclosures at the date of the consolidated financial statements and during the reporting period. Actual results could differ materially from these estimates.

These condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and notes thereto included in the Company’s Annual Report on Form 10-K for the year ended December 31, 2023.

Going Concern: The Company’s consolidated financial statements have been prepared and presented on a basis assuming it continues as a going concern. During the years ended December 31, 2023 and 2022 and through September 30, 2024, the Company incurred losses from operations and net cash outflows from operating activities as disclosed in the consolidated statements of operations and cash flows, respectively. Since the Company’s inception and as of September 30, 2024, the Company had an accumulated deficit of \$297.3 million and it expects to incur losses for the immediate future. To date, the Company has been funded by equity financings, and although the Company believes that it will be able to successfully fund its operations, there can be no assurance that it will be able to do so or that it will ever operate profitably. These factors raise substantial doubt about the Company’s ability to continue as a going concern through the next twelve months. The Company became a revenue-generating company after acquiring the Aquadex Business in August 2016. The Company expects to incur additional losses in the near-term as it grows the Aquadex Business, including investments in its sales and marketing capabilities, product development, purchasing inventory, manufacturing components, generating additional clinical evidence supporting the efficacy of the Aquadex System, and complying with the requirements related to being a U.S. public company. To become and remain profitable, the Company must succeed in expanding the adoption and market acceptance of the Aquadex System. This will require the Company to succeed in training personnel at hospitals and in outpatient care settings, and effectively and efficiently manufacturing, marketing, and distributing the Aquadex System and related components. There can be no assurance that the Company will succeed in these activities, and it may never generate revenues sufficient to achieve profitability.

On April 30, 2024, the Company closed on a best-efforts public offering of 240,571 shares of its common stock, 80,854 shares of its common stock for pre-funded warrants and warrants to purchase up to an aggregate of 3,214,288 shares of its common stock at a combined public offering price \$8.40 per share. All pre-funded warrants were exercised on the date of the offering. Each share of common stock (or prefunded warrant in lieu thereof) was sold together with one warrant to purchase one and a half shares of common stock. The warrants have an exercise price of \$2.10 per share, were exercisable immediately upon issuance, and expire five years following the date of issuance. Each whole common warrant entitles the holder thereof to purchase one share of common stock.

The common warrants contain a reset of the exercise price, effective upon the Warrant Stockholder Approval, to a price equal to the lesser of (i) the then exercise price, (ii) the lowest volume weighted average price for the five trading days immediately following the date we effect a reverse stock split in the future and (iii) if we effect a reverse stock split prior to obtaining the Warrant Stockholder Approval, the lowest volume weighted average price for the five trading days immediately following the date we obtain the Warrant Stockholder Approval. The Company secured the Warrant Stockholder Approval on June 6, 2024. In addition, the common warrants provided for, full ratchet anti-dilution adjustment to the exercise price and number of shares underlying the common warrants upon our issuance of our common stock or common stock equivalents at a price per share that is less than the exercise price of the common warrants, subject to certain exemptions. In no event will the exercise price of the common warrants with respect to either adjustment be reduced below a floor price of \$2.10.

The gross proceeds to the Company from the offering, before deducting the placement agent fees and other offering expenses were approximately \$2.7 million.

On July 24, 2024, the Company announced that it had entered into a definitive securities purchase agreement with certain institutional investors for the purchase and sale of 469,340 shares of the Company's common stock at a price of \$4.24 per share of common stock in a registered direct offering priced at-the-market under Nasdaq rules.

In addition, in a concurrent private placement, the Company issued to the investors warrants to purchase up to 938,680 shares of common stock. The warrants have an exercise price of \$3.99 per share, were exercisable immediately following the date of issuance and have a term of five years from the date of issuance.

The closing of the registered direct offering and the concurrent private placement occurred on or about July 25, 2024.

The gross proceeds to the Company from the registered direct offering and the concurrent private placement, before deducting the placement agent fees and other offering expenses payable by the Company, were approximately \$2.0 million. The Company intends to use the net proceeds from the offering for working capital and for general corporate purposes.

On August 23, 2024, the Company entered into a placement agency agreement with Ladenburg Thalmann & Co. Inc. and a securities purchase agreement with certain purchasers pursuant to which the Company agreed to sell, in a registered direct offering, an aggregate of 483,351 shares of the Company's common stock, \$0.0001 par value per share, at a purchase price of \$1.8450 per Share and accompanying Common Warrant.

The Shares were sold pursuant to the Company's effective shelf registration statement on Form S-3 (File No. 333-280647), including a base prospectus contained therein, which was originally filed with the Securities and Exchange Commission (the "SEC") on July 1, 2024, and was declared effective by the SEC on July 9, 2024, and a related prospectus supplement, dated August 23, 2024, related to the Registered Offering.

Pursuant to the Purchase Agreement, in a concurrent private placement the Company also agreed to sell and issue to the Purchasers, warrants to purchase up to 483,351 shares of Common Stock. The Common Warrants have an exercise price of \$1.72 per share, are immediately exercisable and expire on the fifth anniversary on the effective date of the registration statement to be filed for the purpose of registering the Common Warrant Shares.

The gross proceeds of the offering, before deducting the Placement Agent's fees and expenses and other offering expenses payable by the Company and excluding the net proceeds, if any, from the exercise of the Common Warrants or Placement Agent Warrants, was approximately \$892,000. The Offering closed on August 26, 2024. The Company also issued to the Placement Agent, or its designees, warrants to purchase up to 14,501 shares of our Common Stock as part of the compensation payable to the Placement Agent in connection with this offering. The Placement Agent Warrants are not registered pursuant to the prospectus supplement and the accompanying prospectus. The Placement Agent Warrants have substantially the same terms as the Common Warrants described above, except that the Placement Agent Warrants will have an exercise price of \$3.04425 per share and will expire August 23, 2029.

Understanding the near-term need to raise capital, the Company has recently undertaken steps to reduce our monthly cash burn rate by approximately 40%, balanced against our strategic growth initiatives, which will provide more flexibility in anticipation of tougher capital market conditions for microcap companies like Nuwellis. These reductions include, but are not limited to the following: selected job eliminations, a reduction of the salaries for members of senior management, no merit increases to the base salaries of any named executive officer or employee in 2024 for performance provided during the fiscal year ended December 31, 2023, no cash bonuses to any named executive officer or employee in 2024 for performance provided during the fiscal year ended December 31, 2023, a reduction in Board of Director and committee fees, temporary suspension of Company 401k match, travel reductions, and reductions to select professional services. The Board recently authorized the restoration of the Company 401k match effective October 1, 2024.

On November 5, 2024, the Company announced the entry into definitive agreements for the immediate exercise of certain outstanding warrants issued by the Company on April 30, 2024 (collectively, the “Existing Warrants”) to purchase up to an aggregate of 1,832,517 shares of the Company’s common stock at their current exercise price of \$2.10 per share for total gross proceeds of approximately \$3.8 million, prior to deducting inducement agent fees and estimated offering expenses. An additional \$1.3 million of gross proceeds was received through the exercise of warrants over the last week in accordance with their original terms. In consideration for the immediate exercise of the Existing Warrants, the Company will issue Series I common stock purchase warrants (the “Series I Warrants”) and Series II common stock purchase warrants (the “Series II Warrants”) to purchase up to an aggregate of 3,665,034 shares of common stock. The Series I Warrants will have an exercise price of \$1.94, will be exercisable six (6) months from the date of issuance, and will have a term of five (5) years from the date of exercisability. The Series II Warrants will have an exercise price of \$1.94, will be exercisable six (6) months from the date of issuance, and will have a term of two (2) years from the date of exercisability. The Series I Warrants and Series II Warrants are fixed priced and do not contain any variable pricing features. The Series I Warrants and Series II Warrants described above were offered in a private placement pursuant to an applicable exemption from the registration requirements under Section 4(a)(2) of the Securities Act of 1933 (the “Securities Act”), and, along with the shares of common stock issuable upon their exercise, have not been registered under the Securities Act, and may not be offered or sold in the United States absent registration with the Securities and Exchange Commission (the “SEC”) or an applicable exemption from such registration requirements. The securities were offered only to accredited investors. The Company has agreed to file a registration statement with the SEC covering the resale of the shares of common stock issuable upon exercise of the Series I Warrants and Series II Warrants.

The Company believes that its existing capital resources will be sufficient to support its operating plan through May 31, 2025. However, the Company will seek to raise additional capital to support its growth or other strategic initiatives through debt, equity or a combination thereof. There can be no assurance we will be successful in raising additional capital.

Revenue Recognition: The Company recognizes revenue in accordance with Accounting Standards Codification, Topic 606, Revenue from Contracts with Customers. Accordingly, the Company recognizes revenue when its customers obtain control of its products or services, in an amount that reflects the consideration that the Company expects to receive in exchange for those goods and services. See Note 2 – Revenue Recognition below for additional disclosures. For the three months ended September 30, 2024, two customers represented 12% and 10% of net sales. For the nine months ended September 30, 2024, one customer represented 16% of net sales. For the three months ended September 30, 2023, two customers represented 21% and 11% of net sales. For the nine months ended September 30, 2023, two customers each represented 17% and 12% of net sales.

Accounts Receivable: Accounts receivables are unsecured, are recorded at net realizable value, and do not bear interest. The Company makes judgments as to its ability to collect outstanding receivables based upon significant patterns of collectability, historical experience, and management’s evaluation of specific accounts and will provide an allowance for credit losses when collection becomes doubtful. The Company performs credit evaluations of its customers’ financial condition on an as-needed basis. Payment is generally due 30 days from the invoice date and accounts past 30 days are individually analyzed for collectability. When all collection efforts have been exhausted, the account is written off against the related allowance. To date, the Company has not experienced any write-offs or significant deterioration of the aging of its accounts receivable, and therefore, no allowance for doubtful accounts was considered necessary as of September 30, 2024, or December 31, 2023. As of September 30, 2024, two customers represented 16% and 11% of the accounts receivable balance. As of December 31, 2023, two customers represented 14% and 15% of the total accounts receivable balance.

Inventories: Inventories represent finished goods purchased from the Company’s suppliers and are recorded as the lower of cost or net realizable value using the first-in, first-out method. Overhead is allocated to manufactured finished goods inventory based on the normal capacity of the Company’s production facilities. Abnormal amounts of overhead, if any, are expensed as incurred. Inventories consisted of the following:

<i>(in thousands)</i>	September 30, 2024	December 31, 2023
Finished Goods	\$ 538	\$ 393
Work in Process	220	207
Raw Materials	1,150	1,472
Inventory Reserves	(44)	(75)
Total	\$ 1,864	\$ 1,997

Loss per Share: Basic loss per share is computed based on the net loss for each period divided by the weighted average number of common shares outstanding. See Note 3 – Stockholders’ Equity below for additional disclosures.

Diluted earnings per share is computed based on the net loss allocable to common stockholders for each period divided by the weighted average number of common shares outstanding, increased by the number of additional shares that would have been outstanding had the potentially dilutive common shares been issued, and reduced by the number of shares the Company could have repurchased from the proceeds from issuance of the potentially dilutive shares. Potentially dilutive shares of common stock include shares underlying outstanding convertible preferred stock, warrants, stock options and other stock-based awards granted under stock-based compensation plans.

The following table sets forth the potential shares of common stock that are not included in the calculation of diluted net loss per share because to do so would be anti-dilutive as of the end of each period presented:

	September 30	
	2024	2023
Stock options	3,890	3,101
Warrants to purchase common stock	4,112,197	37,401
Series F convertible preferred stock	68,961	254
Series J convertible preferred stock	67	—
Total	4,185,115	40,756

The following table reconciles reported net loss with reported net loss per share for each of the three and nine months ended September 30:

	Three months ended September 30		Nine months ended September 30	
	2024	2023	2024	2023
<i>(in thousands, except per share amounts)</i>				
Net income (loss)	\$ 2,358	\$ (3,370)	\$ (9,697)	\$ (14,700)
Deemed dividend attributable to Series J Convertible Preferred Stock	—	—	541	—
Net loss attributable to common shareholders	\$ 2,358	\$ (3,370)	\$ (9,156)	\$ (14,700)
Weighted average shares outstanding	1,352	53	647	41
Basic and diluted loss per share	\$ 1.74	\$ (63.27)	\$ (14.99)	\$ (357.42)

Recently Issued Accounting Pronouncements: In November 2023, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2023-07, *Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures*. The guidance requires expanded interim and annual disclosures of segment information including the disclosure of significant segment expenses that are regularly provided to the chief operating decision maker and included within segment profit and loss. The guidance is effective for the Company’s fiscal 2024 Form 10-K and interim periods thereafter. The Company is currently evaluating the ASU to determine its impact on the Company’s disclosures.

In December 2023, the FASB issued ASU 2023-09, *Income Taxes (Topic 740): Improvements to Income Tax Disclosures*. The guidance requires expanded annual disclosures including the standardization and disaggregation of income tax rate reconciliation categories and the amount of income taxes paid by jurisdiction. The guidance is effective for the Company’s fiscal 2025 Form 10-K. The Company is currently evaluating the ASU to determine its impact on the Company’s disclosures.

In March 2024, the SEC adopted rules under SEC Release No. 33-11275, *The Enhancement and Standardization of Climate-Related Disclosures for Investors*, which requires the disclosure of material Scope 1 and Scope 2 greenhouse gas emissions and other climate-related topics in annual reports and registration statements. For non-accelerated filers and smaller reporting companies, disclosure requirements will begin phasing in for fiscal years beginning on or after January 1, 2027, subject to legal challenges and the SEC's voluntary stay of the disclosure requirements. The Company is currently evaluating the impact these rules will have on its consolidated financial statements and related disclosures.

Subsequent Events: The Company evaluates events through the date the condensed consolidated financial statements are filed for events requiring adjustment to or disclosure in the condensed consolidated financial statements. See note 9 – Subsequent Events for additional disclosures.

Note 2 – Revenue Recognition

Net Sales: The Company sells its products in the United States primarily through a direct salesforce. Customers who purchase the Company's products include hospitals and clinics throughout the United States. In countries outside the United States, the Company sells its products through a limited number of specialty healthcare distributors in Austria, Belarus, Brazil, Colombia, The Czech Republic, Germany, Greece, Hong Kong, India, Indonesia, Israel, Italy, Panama, Romania, Singapore, Slovak Republic, Spain, Switzerland, Thailand, United Arab Emirates, and the United Kingdom. These distributors resell the Company's products to hospitals and clinics in their respective geographies. International revenue represents 3% and 5% of net sales for the three months ended September 30, 2024 and 2023, and 4% and 5% of net sales for the nine months ended September 30, 2024 and 2023, respectively.

Revenue from product sales is recognized when the customer or distributor obtains control of the product, which occurs at a point in time, most frequently upon shipment of the product or receipt of the product, depending on shipment terms. The Company's standard shipping terms are FOB shipping point unless the customer requests that control and title to the inventory transfer upon delivery.

Revenue is measured as the amount of consideration we expect to receive, adjusted for any applicable estimates of variable consideration and other factors affecting the transaction price, which is based on the invoiced price, in exchange for transferring products. All revenue is recognized when the Company satisfies its performance obligations under the contract. The majority of the Company's contracts have a single performance obligation and are short term in nature. The Company has entered into extended service plans with customers whose related revenue is recognized over time. This revenue represents less than 1% of net sales for the three and nine months ended September 30, 2024 and 2023. The unfulfilled performance obligations related to these extended service plans are included in deferred revenue, which is included in other current liabilities on the condensed consolidated balance sheets. The majority of the deferred revenue is expected to be recognized within one year.

Sales taxes and value added taxes in foreign jurisdictions that are collected from customers and remitted to governmental authorities are accounted for on a net basis and therefore are excluded from net sales. Revenue includes shipment and handling fees charged to customers. 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 included in cost of goods sold.

Product Returns: The Company offers customers a limited right of return for its products in case of non-conformity or performance issues. The Company estimates the amount of its product sales that may be returned by its customers and records this estimate as a reduction of revenue in the period the related product revenue is recognized. The Company currently estimates product return liabilities using available industry data and its own historical sales and returns information. The Company has received minimal returns to date and believes that future returns of its products will be minimal. Therefore, revenue recognized is not currently impacted by variable consideration related to product returns.

Note 3 – Stockholders' Equity

Series F Convertible Preferred Stock: On November 27, 2017, the Company closed on an underwritten public offering of Series F convertible preferred stock and warrants to purchase shares of common stock. The Series F convertible preferred stock has full ratchet price-based anti-dilution protection, subject to customary carve-outs, in the event of a down-round financing at a price per share below the conversion price of the Series F convertible preferred stock (which protection will expire if, during any 20 of 30 consecutive trading days, the volume weighted average price of the Company's common stock exceeds 300% of the then-effective conversion price of the Series F convertible preferred stock and the daily dollar trading volume for each trading day during such period exceeds \$7,000,000). Effective for every stock offering or reverse stock split, the conversion price of the Series F convertible preferred stock has been recalculated based on the offering price.

As of August 23, 2024 (the most recent stock offering), the conversion price of the Series F convertible preferred stock was recalculated to \$542.01. As of September 30, 2024, and December 31, 2023, 127 shares of the Series F convertible preferred stock remained outstanding.

2023 At-the-Market Program: In March 2023, the Company filed a Prospectus Supplement to its Registration Statement on Form S-3 with the SEC in connection with a proposed At-the-Market Securities offering (the “At-the-Market Program”). During 2023, the Company issued 18,781 shares of common stock under the At-the-Market Program for gross proceeds of approximately \$2.3 million. Net proceeds totaled approximately \$2.1 million after deducting the underwriting discounts and commissions and other costs associated with the offering. The Company terminated its At-the-Market Program in July of 2024.

Supply Agreement Warrants: On June 19, 2023, we entered into a Supply and Collaboration Agreement (the “**Supply Agreement**”) with DaVita Inc., a Delaware corporation (“**DaVita**”), pursuant to which DaVita would pilot the Aquadex ultrafiltration therapy system to treat adult patients with congestive heart failure and related conditions within select U.S. markets. The pilot program launched by the end of fourth quarter 2023 and extended through May 31, 2024 (the “**Pilot**”). On May 31, 2024, DaVita and Nuwellis amended the Supply and Collaboration Agreement extending the Pilot term through August 31, 2024. Through the Pilot, ultrafiltration therapy using Aquadex would be offered at a combination of DaVita’s hospital customer and outpatient center locations, with both companies collaborating on the roll-out of the therapy, clinician training, and patient support. At the conclusion of the Pilot, DaVita had the option, in its sole discretion, to extend the Supply Agreement with the Company for continued provision of both inpatient and outpatient ultrafiltration services for up to 10 years (“**Ultrafiltration Services Approval**”). The parties agreed to terminate the Supply Agreement effective August 21, 2024.

In conjunction with the Supply Agreement, the Company issued DaVita a warrant to purchase up to an aggregate of 36,830 shares of common stock of the Company, par value \$0.0001 per share, at an exercise price of \$115.49 per share (the “**DaVita Warrant**”), provided that at no time can the DaVita Warrant be exercised for an amount of shares that would represent greater than 19.9% ownership in the Company subject to certain vesting milestones. The DaVita Warrant was expected to vest in four tranches as follows: (i) 25% upon receipt of notice to extend the Supply Agreement past the initial pilot-term; (ii) 25% upon the attainment by the Company of a net revenue achievement from DaVita’s efforts pursuant to the Supply Agreement within twelve months of Ultrafiltration Services Approval; (iii) 25% upon the attainment by the Company of a net revenue achievement from DaVita’s efforts pursuant to the Supply Agreement within twenty-four months of Ultrafiltration Services Approval; and (iv) 25% upon the attainment by the Company of a net revenue achievement from DaVita’s efforts pursuant to the Supply Agreement within thirty-six months of Ultrafiltration Services Approval. This warrant terminated with the termination of the Supply Agreement on August 21, 2024.

On August 21, 2024, the Company and DaVita Inc., a Delaware corporation (“DaVita”) entered into a Termination Agreement and mutually agreed to terminate its Supply and Collaboration Agreement, dated as of June 19, 2023, as amended (the “Supply Agreement”) and the related Common Stock Purchase Warrant (the “Warrant”) and Registration Rights Agreement (the “Registration Rights Agreement”), each dated as of June 19, 2023. The Supply Agreement, Warrant and Registration Rights Agreement are collectively referred to herein as the “DaVita Agreements”. The termination of the Davita Agreements was effective immediately. The respective rights and obligations of each party under the Supply Agreement that survive termination pursuant to the terms and conditions set forth therein shall continue and all rented and unused Products (as defined in the Supply Agreement) shall be returned to the Company. The vesting milestones pursuant to the terms of the Supply Agreement were never attained and therefore the Warrant never vested. Additionally, because the Ultrafiltration Services Approval (as defined in the Supply Agreement) was never attained, the registration rights pursuant to the terms of the Registration Rights Agreement were never in effect.

October 2023 Offering: On October 12, 2023, Nuwellis, Inc. entered into a Placement Agency Agreement with Lake Street Capital Markets, LLC and Maxim Group LLC, pursuant to which the Company issued and sold, in a best efforts registered public offering by the Company, 150,000 units, with each Unit consisting of (A) one share of the Company’s Series J Convertible Redeemable Preferred Stock, par value \$0.0001 per share, and (B) one warrant to purchase one-half of one (0.50) share of Series J Convertible Preferred Stock, at a price to the public of \$15.00 per Unit, less placement agent fees and commissions. The public offering price of \$15.00 per Unit reflects the issuance of the Series J Convertible Preferred Stock with an original issue discount of 40%. The Company also registered under the Registration Statement (as defined below) an additional 362,933 shares of Series J Convertible Preferred Stock that will be issued, if and when the Company’s Board of Directors declares such dividends, as paid in-kind dividends and the shares of Common Stock issuable upon conversion of the Series J Convertible Preferred Stock issued as PIK dividends.

The Units, the shares of Series J Convertible Preferred Stock, the Warrants, the PIK Dividend Shares, the PIK Conversion Shares as well as the shares of Series J Convertible Preferred Stock issuable upon exercise of the Warrants and the shares of the Company's common stock, par value \$0.0001 per share, issuable upon conversion of the Series J Convertible Preferred Stock, were offered and sold by the Company pursuant to an effective registration statement on Form S-1. The closing of the Offering contemplated by the Placement Agency Agreement occurred on October 17, 2023.

On October 17, 2023, the Company also entered into a warrant agency agreement with the Company's transfer agent, Equiniti Trust Company, LLC, who acts as warrant agent for the Company, setting forth the terms and conditions of the Warrants sold in this Offering.

Each Warrant has an exercise price of \$262.50 per one-half of one (0.5) share of Series J Convertible Preferred Stock, is immediately exercisable and will expire three (3) years from the date of issuance.

There is no established trading market for the Series J Convertible Preferred Stock or the Warrants and we do not expect a market to develop. In addition, we do not intend to list the Series J Convertible Preferred Stock or the Warrants on The Nasdaq Capital Market or any other national securities exchange or any other nationally recognized trading system.

The gross proceeds to the Company from the October 17, 2023, Offering were \$2.25 million. Net proceeds were approximately \$1.5 million after deducting placement agent fees and commissions and Offering expenses payable by the Company. The Company used the net proceeds from the Offering for working capital and for general corporate purposes.

The Series J Convertible Preferred Stock is classified as mezzanine equity and accreted to reflect its redemption value as of each reporting date. The accretion will be reflected as a deemed dividend adjustment to arrive at net loss attributed to common stockholders for earnings per share calculations.

The Warrants are recorded as a liability and re-measured at fair value as of each reporting date with fair value changes being recorded as non-operating income or expense. The Warrants were valued on day 1 and exceeded the gross proceeds of the offering. This resulted in a day 1 financing expense of \$2.7 million.

April 2024 Offering: On April 30, the Company closed on a best efforts public offering of 240,571 shares of its common stock, 80,854 shares of its common stock for pre-funded warrants and warrants to purchase up to an aggregate of 3,214,288 shares of its common stock at a combined public offering price \$8.40 per share. All pre-funded warrants were exercised on the date of the offering. Each share of common stock (or prefunded warrant in lieu thereof) was sold together with one warrant to purchase one and a half shares of common stock. The warrants have an exercise price of \$2.10 per share, were exercisable immediately upon issuance, and will expire five years following the date of issuance. Each whole common warrant entitles the holder thereof to purchase one share of common stock.

The common warrants contain a reset of the exercise price, effective upon the Warrant Stockholder Approval, to a price equal to the lesser of (i) the then exercise price, (ii) the lowest volume weighted average price for the five trading days immediately following the date we effect a reverse stock split in the future and (iii) if we effect a reverse stock split prior to obtaining the Warrant Stockholder Approval, the lowest volume weighted average price for the five trading days immediately following the date we obtain the Warrant Stockholder Approval. The Company secured the Warrant Stockholder Approval on June 6, 2024. Subsequent to June 30 2024, the number of shares underlying the common warrants were adjusted to 2,710,734 shares and the exercise price was adjusted to \$2.49 per share. In addition, the common warrants provided for full ratchet anti-dilution adjustment to the exercise price and number of shares underlying the common warrants upon our issuance of our common stock or common stock equivalents at a price per share that is less than the exercise price of the common warrants, subject to certain exemptions. In no event will the exercise price of the common warrants with respect to either adjustment be reduced below a floor price of \$2.10.

The gross proceeds to the Company from the offering, before deducting the placement agent fees and other offering expenses were approximately \$2.7 million.

The warrants offered in this financing were originally classified as a liability on the balance sheet. An independent valuation of the warrants was performed and reviewed with management, and the valuation at issuance was \$7.8 million. The warrants had down-round protection and the price was reset from the July 2024 and the August 2024 offerings. At the August 2024 offering, the exercise price of these warrants were adjusted to \$2.10, which represented the floor price on these warrants. As the price floor was hit, there was no further down-round protection. The warrants were re-evaluated and classified as equity as of September 30, 2024. During the quarter, there were 398,488 of warrants exercised at a weighted average exercise price of \$2.97. The warrants are fair valued on the date of exercise and the adjustment to fair value is recorded to Additional Paid in Capital. There were 2,651,426 of warrants converted to equity resulting in \$4.2 million to Additional Paid in Capital.

July 2024 Offering: On July 24, 2024, the Company announced that it had entered into a definitive securities purchase agreement with certain institutional investors for the purchase and sale of 469,340 shares of the Company's common stock at a price of \$4.24 per share of common stock in a registered direct offering priced at-the-market under Nasdaq rules.

In addition, in a concurrent private placement, the Company issued the investors warrants to purchase up to 938,680 shares of common stock. The warrants have an exercise price of \$3.99 per share, will be exercisable immediately following the date of issuance and have a term of five years from the date of issuance. The warrants issued in this offering were concluded to be equity classified.

The closing of the registered direct offering and the concurrent private placement occurred on July 25, 2024.

The gross proceeds to the Company from the registered direct offering and the concurrent private placement were approximately \$2.0 million. After deducting placement agent fees and other offering expenses payable by the Company, net proceeds were approximately \$1.5 million. The Company intends to use the net proceeds from the offering for working capital and for general corporate purposes.

August 2024 Offering: On August 23, 2024, the Company entered into a placement agency agreement with Ladenburg Thalmann & Co. Inc. and a securities purchase agreement with certain purchasers pursuant to which the Company agreed to sell, in a registered direct offering, an aggregate of 483,351 shares of the Company's common stock, \$0.0001 par value per share, at a purchase price of \$1.8450 per Share and accompanying Common Warrant.

The Shares were sold pursuant to the Company's effective shelf registration statement on Form S-3 (File No. 333-280647), including a base prospectus contained therein, which was originally filed with the Securities and Exchange Commission (the "SEC") on July 1, 2024, and was declared effective by the SEC on July 9, 2024, and a related prospectus supplement, dated August 23, 2024, related to the Registered Offering.

Pursuant to the Purchase Agreement, in a concurrent private placement the Company also agreed to sell and issue to the Purchasers, warrants to purchase up to 483,351 shares of Common Stock. The Common Warrants have an exercise price of \$1.72 per share, are immediately exercisable and expire on the fifth anniversary on the effective date of the registration statement to be filed for the purpose of registering the Common Warrant Shares. The warrants issued in this offering were concluded to be equity classified.

The gross proceeds of the Offering, before deducting the Placement Agent's fees and expenses and other offering expenses payable by the Company and excluding the net proceeds, if any, from the exercise of the Common Warrants or Placement Agent Warrants, will be approximately \$892,000. The Offering closed on August 26, 2024. The Company also issued to the Placement Agent, or its designees, warrants to purchase up to 14,501 shares of our Common Stock as part of the compensation payable to the Placement Agent in connection with this offering. The Placement Agent Warrants are not registered pursuant to the prospectus supplement and the accompanying prospectus. The Placement Agent Warrants have substantially the same terms as the Common Warrants described above, except that the Placement Agent Warrants will have an exercise price of \$3.04425 per share and will expire August 23, 2029.

Underwriter and Placement Agent Fees: In connection with the offerings described above, the Company paid the underwriter or placement agent, as applicable, an aggregate cash fee of either 7% or 8% of the aggregate gross proceeds raised in each of the offerings, except with respect to the issuances made pursuant to the At-the-Market Program, for which the placement fee was equal to 3% of the aggregate gross proceeds.

At the Company's annual meeting of stockholders on June 6, 2024, its stockholders approved a proposal to amend the Company's Fourth Amended and Restated Certificate of Incorporation to effect a reverse split of the Company's outstanding Common Stock at a ratio in the range of 1-for-5 to 1-for-70 to be determined at the discretion of our Board of Directors. On June 26, 2024, the Company's board of directors approved a one-for-thirty-five reverse stock split of the Company's issued and outstanding shares of common stock (the "**Reverse Stock Split**"). On June 27, 2024, the Company filed with the Secretary of State of the State of Delaware a Certificate of Amendment to its Certificate of Incorporation (the "**Certificate of Amendment**") to affect the Reverse Stock Split. The Reverse Stock Split became effective as of 5:00 p.m. Eastern Time on June 27, 2024, and the Company's common stock began trading on a split-adjusted basis when the market opened on June 28, 2024. All share and per-share amounts have been retroactively adjusted to reflect the reverse stock splits for all periods presented.

Note 4 - Stock-Based Compensation

Under the fair value recognition provisions of U.S. GAAP for accounting for stock-based compensation the Company measures stock-based compensation expense at the grant date based on the fair value of the award and recognizes the compensation expense over the requisite service period, which is generally the vesting period.

The following table presents the classification of stock-based compensation expense recognized for the periods below:

<i>(in thousands)</i>	Three months ended		Nine months ended	
	September 30		September 30	
	2024	2023	2024	2023
Selling, general and administrative expense	\$ 99	\$ 133	\$ 363	\$ 484
Research and development expense	2	2	11	29
Total stock-based compensation expense	\$ 101	\$ 135	\$ 374	\$ 513

During the three months ended September 30, 2024, and 2023, under the 2017 Equity Incentive Plan, and the 2021 Inducement Plan, the Company granted zero and 532 stock options, respectively, to its directors, officers and employees. During the nine months ended September 30, 2024 and 2023, the Company granted 1,264 and 3,544 stock options, respectively, to its directors, officers and employees. Vesting generally occurs over an immediate to 48-month period based on a time-of-service condition. The weighted-average grant date fair value of the stock-options issued during the three months ended September 30, 2024 and 2023 was zero and \$62.65 per share, respectively. The weighted-average grant date fair value of the stock options issued during the nine months ended September 30, 2024 and 2023 was \$24.14 and \$226.26 per share, respectively.

The total number of stock options outstanding as of September 30, 2024 and September 30, 2023 was 3,890 and 3,101, respectively.

The weighted-average assumptions used in the Black-Scholes option-pricing model are as follows for the stock options granted during the three and nine months ended September 30, 2024 and 2023:

	Three months ended		Nine months ended	
	September 30		September 30	
	2024	2023	2024	2023
Expected volatility	138.70%	131.06%	138.70%	152.59%
Expected Life of options (years)	5.51	6.25	5.51	6.19
Expected dividend yield	0%	0%	0%	0%
Risk-free interest rate	3.94%	4.29%	3.94%	4.16%

During the three months ended September 30, 2024 and 2023, 420 and 69 stock options vested, respectively, and 102 and 595 stock options were expired or forfeited during these periods, respectively. During the nine months ended September 30, 2024 and 2023, 1,767 and 129 stock options vested, respectively, and 465 and 680 stock options were expired or forfeited during these periods, respectively. During the three and nine months ended September 30, 2024 and 2023, no options were exercised.

Note 5—Fair Value of Financial Instruments

The Company’s financial instruments consist of cash and cash equivalents and warrants.

Pursuant to the requirements of Accounting Standards Codification (“ASC”) Topic 820 “Fair Value Measurement,” the Company’s financial assets and liabilities measured at fair value on a recurring basis are classified and disclosed in one of the following three categories:

- Level 1 - Financial instruments with unadjusted quoted prices listed on active market exchanges.

- Level 2 - Financial instruments lacking unadjusted, quoted prices from active market exchanges, including over-the-counter traded financial instruments. The prices for the financial instruments are determined using prices for recently traded financial instruments with similar underlying terms as well as directly or indirectly observable inputs, such as interest rates and yield curves that are observable at commonly quoted intervals.
- Level 3 - Financial instruments that are not actively traded on a market exchange. This category includes situations where there is little, if any, market activity for the financial instrument. The prices are determined using significant unobservable inputs or valuation techniques.

The fair value of the Company's common and preferred stock warrant liabilities related to the investor warrants issued in the October 2023, October 2022 and April 2024 public offerings was calculated using a Monte Carlo valuation model and was classified as Level 3 in the fair value hierarchy.

The following is a roll-forward of the fair value of the Level 3 warrants:

(in thousands)

Balance at December 31, 2022	\$	6,868
Change in fair value		755
Issuance of Common Stock for exercise of Series I warrants		(7,623)
October 17, 2023, issuance of Series J warrants		4,965
Exercise of Series J warrants		(536)
Change in fair value		(1,586)
Balance at December 31, 2023		2,843
Exercise of Series J warrants		(1,357)
April 30, 2024, issuance of common warrants		7,813
Exercise of April 2024 warrants		(1,373)
Reclassification of April 2024 warrants to equity		(2,844)
Change in fair value		(4,602)
Balance at September 30, 2024	\$	480

Note 6 – Income Taxes

The Company provides for a valuation allowance when it is more likely than not that it will not realize a portion of its deferred tax assets. The Company has established a full valuation allowance for its U.S. and foreign deferred tax assets due to the uncertainty that enough taxable income will be generated in those taxing jurisdictions to utilize the assets. Therefore, the Company has not reflected any benefit of such deferred tax assets in the accompanying condensed consolidated financial statements.

As of September 30, 2024, there were no material changes to what the Company disclosed regarding tax uncertainties or penalties in its Annual Report on Form 10-K for the year ended December 31, 2023.

Note 7—Operating Leases

The Company leases a 23,000 square foot facility located in Eden Prairie, Minnesota for office and manufacturing space under a non-cancelable operating lease that expires in March 2027. In November 2021, the Company entered into a fourth amendment to the lease, extending the term of the lease from March 31, 2022 to March 31, 2027. This facility serves as our corporate headquarters and houses substantially all our functional departments. Monthly rent and common area maintenance charges, including estimated property tax for our headquarters, total approximately \$34,000. The lease contains provisions for annual inflationary adjustments. Rent expense is being recorded on a straight-line basis over the term of the lease. Beginning on April 1, 2022, the annual base rent was \$10.50 per square foot, subject to future annual increases of \$0.32 to \$0.34 per square foot.

Note 8—Commitments and Contingencies

Employee Retirement Plan: The Company has a 401(k) retirement plan that provides retirement benefits to all eligible U.S. employees. Eligible employees may contribute a percentage of their annual compensation, subject to Internal Revenue Service limitations, with the Company matching a portion of the employees' contributions at the discretion of the Company.

Note 9- Subsequent Events

On October 20, 2024 (the “Effective Date”), Nuwellis, Inc. (the “Company”) and SeaStar Medical Holding Corporation (“SeaStar”) entered into a Confidential Settlement Agreement and Release (the “Settlement Agreement”), which terminated the License and Distribution Agreement entered into by the Company and SeaStar, dated as of December 27, 2022 (the “Distribution Agreement”) and the Supplier and Distributor Quality Agreement dated as of March 5, 2024 (the “Supply Agreement,” and together with the Distribution Agreement, the “SeaStar Agreements”) pursuant to which SeaStar appointed the Company as its exclusive distributor for the sale and distribution of SeaStar’s product, QUELIMMUNE™ with SeaStar agreeing to pay the Company \$900,000 before December 31, 2024. The Company is accounting for the settlement as a gain contingency and will record the gain at the earlier of when the contingency is realized or realizable. The Company received payment of \$500,000 on October 22, 2024 and was recognized in October 2024.

On November 5, 2024, the Company announced the entry into definitive agreements for the immediate exercise of certain outstanding warrants issued by the Company on April 30, 2024 (collectively, the “Existing Warrants”) to purchase up to an aggregate of 1,832,517 shares of the Company’s common stock at their current exercise price of \$2.10 per share for total gross proceeds of approximately \$3.8 million, prior to deducting inducement agent fees and estimated offering expenses. An additional \$1.3 million of gross proceeds was received through the exercise of warrants over the last week in accordance with their original terms. In consideration for the immediate exercise of the Existing Warrants, the Company will issue Series I common stock purchase warrants (the “Series I Warrants”) and Series II common stock purchase warrants (the “Series II Warrants”) to purchase up to an aggregate of 3,665,034 shares of common stock. The Series I Warrants will have an exercise price of \$1.94, will be exercisable six (6) months from the date of issuance, and will have a term of five (5) years from the date of exercisability. The Series II Warrants will have an exercise price of \$1.94, will be exercisable six (6) months from the date of issuance, and will have a term of two (2) years from the date of exercisability. The Series I Warrants and Series II Warrants are fixed priced and do not contain any variable pricing features. The Series I Warrants and Series II Warrants described above were offered in a private placement pursuant to an applicable exemption from the registration requirements under Section 4(a)(2) of the Securities Act of 1933 (the “Securities Act”), and, along with the shares of common stock issuable upon their exercise, have not been registered under the Securities Act, and may not be offered or sold in the United States absent registration with the Securities and Exchange Commission (the “SEC”) or an applicable exemption from such registration requirements. The securities were offered only to accredited investors. The Company has agreed to file a registration statement with the SEC covering the resale of the shares of common stock issuable upon exercise of the Series I Warrants and Series II Warrants.

ITEM 2. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our interim condensed consolidated financial statements and related notes included in Part I, Item 1 of this Quarterly Report on Form 10-Q and the audited consolidated financial statements and related notes and Management’s Discussion and Analysis of Financial Condition and Results of Operations contained in our Annual Report on Form 10-K for the year ended December 31, 2023. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in the forward-looking statements as a result of a variety of factors, including those discussed in Part I, Item 1A “Risk Factors,” in our Annual Report on Form 10-K for the year ended December 31, 2023 and in our subsequent filings with the Securities and Exchange Commission (the “SEC”).

Unless otherwise specified or indicated by the context, “Nuwellis,” “Company,” “we,” “us,” and “our” refer to Nuwellis, Inc. and its subsidiary.

OVERVIEW

About Nuwellis

We are a medical device company dedicated to transforming the lives of patients suffering from fluid overload through science, collaboration, and innovation. The Company is focused on commercializing the Aquadex SmartFlow system for ultrafiltration therapy. The Aquadex SmartFlow system is indicated for temporary (up to eight hours) or extended (longer than 8 hours in patients who require hospitalization) use in adult and pediatric patients weighing 20 kg or more whose fluid overload is unresponsive to medical management, including diuretics.

Prior to July 2016, we were focused on developing the C-Pulse System for treatment of Class III and ambulatory Class IV heart failure. In August 2016, we acquired the Aquadex Business from a subsidiary of Baxter, a global leader in the hospital products and dialysis markets. In September 2016, we announced a refocus of our strategy that included halting all clinical evaluations of the C-Pulse System related technology to fully focus our resources on our recently acquired Aquadex Business. On May 23, 2017, we announced that we were changing our name from Sunshine Heart, Inc. to CHF Solutions, Inc. to more appropriately reflect the direction of our business. On April 27, 2021, the Company announced that it was changing its name from CHF Solutions, Inc. to Nuwellis, Inc. to reflect the expansion of its customer base from treating fluid imbalance resulting from congestive heart failure to also include critical care and pediatrics applications.

Recent Developments

Nasdaq Compliance

As previously disclosed on May 29, 2024 and June 10, 2024, the Company was notified by the Listing Qualifications Department (the “*Staff*”) of The Nasdaq Stock Market LLC (“*Nasdaq*”) that the Company did not satisfy Nasdaq Listing Rules 5550(b)(1) (the “*Stockholder’s Equity Requirement*”) and 5550(a)(2) (the “*Minimum Bid Price Requirement*”), respectively, and was therefore subject to delisting from Nasdaq unless the Company timely requested a hearing before the Nasdaq Hearings Panel (the “*Panel*”).

On July 18, 2024, Nasdaq notified the Company that it had regained compliance with the Minimum Bid Price Requirement. At a hearing before the Panel on July 23, 2024, the Company presented its plan of compliance to regain compliance with the Stockholder’s Equity Requirement.

On August 8, 2024, the Company was notified by Nasdaq that the Panel had granted the Company’s request for continued listing, subject to, among other things, the Company’s filing of its Quarterly Report on Form 10-Q for the period ending September 30, 2024, evidencing compliance with the Stockholder’s Equity Requirement.

Public Offering conforming changes from above

On July 24, 2024, the Company announced that it had entered into a definitive securities purchase agreement with certain institutional investors for the purchase and sale of 469,340 shares of the Company’s common stock at a price of \$4.24 per share of common stock in a registered direct offering priced at-the-market under Nasdaq rules.

In addition, in a concurrent private placement, the Company issued warrants to the investors to purchase up to 938,680 shares of common stock. The warrants have an exercise price of \$3.99 per share, are exercisable immediately following the date of issuance and will have a term of five years from the date of issuance.

The closing of the registered direct offering and the concurrent private placement occurred on or about July 25, 2024.

The gross proceeds to Nuwellis from the registered direct offering and the concurrent private placement, before deducting the placement agent fees and other offering expenses payable by the Company, are expected to be approximately \$2.0 million. Nuwellis intends to use the net proceeds from the offering for working capital and for general corporate purposes.

On August 23, 2024, the Company entered into a placement agency agreement with Ladenburg Thalmann & Co. Inc. and a securities purchase agreement with certain purchasers pursuant to which the Company agreed to sell, in a registered direct offering, an aggregate of 483,351 shares of the Company’s common stock, \$0.0001 par value per share, at a purchase price of \$1.8450 per Share and accompanying Common Warrant.

The Shares are being sold pursuant to the Company’s effective shelf registration statement on Form S-3 (File No. 333-280647), including a base prospectus contained therein, which was originally filed with the Securities and Exchange Commission (the “SEC”) on July 1, 2024, and was declared effective by the SEC on July 9, 2024, and a related prospectus supplement, dated August 23, 2024, related to the Registered Offering.

Pursuant to the Purchase Agreement, in a concurrent private placement the Company also agreed to sell and issue to the Purchasers, warrants to purchase up to 483,351 shares of Common Stock. The Common Warrants have an exercise price of \$1.72 per share, are immediately exercisable and expire on the fifth anniversary on the effective date of the registration statement to be filed for the purpose of registering the Common Warrant Shares.

The gross proceeds of the Offering, before deducting the Placement Agent’s fees and expenses and other offering expenses payable by the Company and excluding the net proceeds, if any, from the exercise of the Common Warrants or Placement Agent Warrants, will be approximately \$892,000. The Offering closed on August 26, 2024. The Company also issued to the Placement Agent, or its designees, warrants to purchase up to 14,501 shares of our Common Stock as part of the compensation payable to the Placement Agent in connection with this offering. The Placement Agent Warrants are not registered pursuant to the prospectus supplement and the accompanying prospectus. The Placement Agent Warrants have substantially the same terms as the Common Warrants described above, except that the Placement Agent Warrants will have an exercise price of \$3.04425 per share and will expire August 23, 2029.

Reverse Stock Split

At the Company's annual meeting of stockholders on June 6, 2024, its stockholders approved a proposal to amend the Company's Fourth Amended and Restated Certificate of Incorporation to effect such a reverse split of the Company's outstanding Common Stock at a ratio in the range of 1-for-5 to 1-for-70 to be determined at the discretion of our Board of Directors. On June 26, 2024, the Company's board of directors approved a one-for-thirty-five reverse stock split of the Company's issued and outstanding shares of common stock (the "**Reverse Stock Split**"). On June 27, 2024, the Company filed with the Secretary of State of the State of Delaware a Certificate of Amendment to its Certificate of Incorporation (the "**Certificate of Amendment**") to affect the Reverse Stock Split. The Reverse Stock Split became effective as of 5:00 p.m. Eastern Time on June 27, 2024, and the Company's common stock began trading on a split-adjusted basis when the market opened on June 28, 2024.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

We have adopted various accounting policies to prepare the condensed consolidated financial statements in accordance with accounting principles generally accepted in the United States ("U.S. GAAP"). Our most significant accounting policies are disclosed in Note 1 to the consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2023.

The preparation of the condensed consolidated financial statements, in conformity with U.S. GAAP, requires us to make estimates and assumptions that affect the amounts reported in the condensed consolidated financial statements and accompanying notes. Our estimates and assumptions, including those related to stock-based compensation, valuation of equity and debt securities, and income tax reserves are updated as appropriate, which in most cases is quarterly. We base our estimates on historical experience, valuations, or various assumptions that are believed to be reasonable under the circumstances. There have been no material changes to our critical accounting policies and estimates from the information provided in Part II, Item 7, *Management's Discussion and Analysis of Financial Condition and Results of Operations* included in our Annual Report on Form 10-K for the year ended December 31, 2023.

Revenue Recognition: We recognize revenue in accordance with ASC Topic 606, Revenue from Contracts with Customers. Accordingly, we recognize revenue when our customers obtain control of their products or services, in an amount that reflects the consideration that we expect to receive in exchange for those goods and services. See Note 2 – Revenue Recognition, included in Part I, Item 1 of this Quarterly Report on Form 10-Q, for additional disclosures.

Accounts Receivable: Our accounts receivables generally have terms that require payment within 30 days. We did not establish an allowance for credit losses as of September 30, 2024, as we have not incurred any write-offs or experienced a deterioration in the aging of our receivables, and we do not expect to experience write-offs in the future. The Company provides reserves against accounts receivable for estimated credit losses that may result from a customer's inability to pay based on a combination of factors, such as the aging of accounts receivable, the customer's financial strength and payment history. To date there the Company has not experienced any write offs.

Inventories: Inventories consist of finished goods, raw materials and subassemblies and are recorded at the lower of cost or net realizable value using the first-in, first-out method.

Stock-Based Compensation: We recognize all share-based payments to employees, directors, and consultants, including grants of stock options and common stock awards, in the consolidated statement of operations and comprehensive loss as an operating expense based on their fair values as established at the grant date. Other equity instruments issued to non-employees consist of warrants to purchase shares of our common stock. These warrants are either fully vested and exercisable at the date of grant or vest over a certain period during which services are provided.

We compute the estimated fair values of stock options and warrants using the Black-Scholes option pricing model and market-based warrants using a Monte Carlo valuation model. Market price at the date of grant is used to calculate the fair value of any restricted stock units and common stock awards.

We expense the fair market value of fully vested awards at the time of grant, and of unvested awards over the period in which the related services are received. Stock-based compensation expense is based on awards ultimately expected to vest and is reduced for estimated forfeitures, except for market-based warrants, which are expensed based on the grant date fair value regardless of whether the award vests. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

Accounting for Warrants: We have issued and may continue to issue warrants to purchase shares of common stock through our public and private offerings and in conjunction with the Supply Agreement executed with DaVita in June 2023. We account for such warrants in accordance with ASC 480, *Distinguishing Liabilities from Equity*, which identifies three categories of freestanding financial instruments that are required to be accounted for as a liability. If determined to be classified as a liability, we will remeasure the fair value of the warrants at each balance sheet date. If determined to be classified as equity, the fair value of the warrants will be measured as of the date of issuance and will not be subject to remeasurement at each subsequent balance sheet date.

The fair value of the warrant liability is estimated using a Monte Carlo simulation model using relevant inputs and assumptions based upon the terms of the warrants.

Loss per Share: Basic loss per share is computed based on the net loss for each period divided by the weighted average number of common shares outstanding. See Note 3 – Stockholders' Equity below for additional disclosures.

Diluted earnings per share is computed based on the net loss allocable to common stockholders for each period divided by the weighted average number of common shares outstanding, increased by the number of additional shares that would have been outstanding had the potentially dilutive common shares been issued, and reduced by the number of shares the Company could have repurchased from the proceeds from issuance of the potentially dilutive shares. Potentially dilutive shares of common stock include shares underlying outstanding convertible preferred stock, warrants, stock options and other stock-based awards granted under stock-based compensation plans.

Impairment of Long-Lived Assets: Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset or asset group may not be recoverable. If the impairment tests indicate that the carrying value of the asset or asset group is greater than the expected undiscounted cash flows to be generated by such asset or asset group, further analysis is performed to determine the fair value of the asset or asset group. To the extent the fair value of the asset or asset group is less than its carrying value, an impairment loss is recognized equal to the amount the fair value of the asset or asset group is exceeded by its carrying amount. Assets to be disposed of are carried at the lower of their carrying value or fair value less costs to sell. Considerable management judgment is necessary to estimate the fair value of assets or asset groups, and accordingly, actual results could vary significantly from such estimates.

The Company continues to report operating losses and negative cash flows from operations, both of which it considers to be indicators of potential impairment. Therefore, the Company evaluates its long-lived assets for potential impairment at each reporting period. The Company has concluded that its cash flows from the various long-lived assets are highly interrelated and, as a result, the Company consists of a single asset group. As the Company expects to continue incurring losses in the foreseeable future, the undiscounted cash flow step was bypassed, and the Company proceeded to measure fair value of the asset group. The Company has determined the fair value of the asset group associated with its loaner units by using expected cash flows estimating future discounted cash flows expected from the rental of these units. For recently acquired assets within the asset group, primarily equipment, the Company determined the fair value based on the replacement cost. There have been no impairment losses recognized for the three and nine-month periods ended September 30, 2024 or the year ended December 31, 2023.

Going Concern: Our consolidated financial statements have been prepared and presented on a basis assuming we continue as a going concern. During the years ended December 31, 2023, and 2022, and through September 30, 2024, we incurred losses from operations and net cash outflows from operating activities as disclosed in the consolidated statements of operations and cash flows, respectively. Since the company's inception and as of September 30, 2024, we had an accumulated deficit of \$297.3 million, and we expect to incur losses for the foreseeable future. To date, we have been funded by debt and equity financings, and although we believe that we will be able to successfully fund our operations into the future, there can be no assurance that we will be able to do so or that we will ever operate profitably. These factors raise substantial doubt about the Company's ability to continue as a going concern through at least twelve months from the report date.

We became a revenue-generating company after acquiring the Aquadex Business in August 2016. We expect to incur additional losses in the near-term as we grow the Aquadex Business, including investments in our sales and marketing capabilities, product development, purchasing inventory and manufacturing components, generating additional clinical evidence supporting the efficacy of the Aquadex System, and complying with the requirements related to being a U.S. public company. To become and remain profitable, we must succeed in expanding the adoption and market acceptance of the Aquadex System. This will require us to succeed in training personnel at hospitals and effectively and efficiently manufacturing, marketing, and distributing the Aquadex System and related components. There can be no assurance that we will succeed in these activities, and we may never generate revenues sufficient to achieve profitability.

Understanding the near-term need to raise capital, the Company has recently undertaken steps to reduce our monthly cash burn rate by approximately 40%, balanced against our strategic growth initiatives, which will provide more flexibility in anticipation of tougher capital market conditions for microcap companies like Nuwellis. These reductions include, but are not limited to the following: selected job eliminations, a reduction of the salaries for members of senior management, no merit increases to the base salaries of any named executive officer or employee in 2024 for performance provided during the fiscal year ended December 31, 2023, no cash bonuses to any named executive officer or employee in 2024 for performance provided during the fiscal year ended December 31, 2023, a reduction in Board of Director and committee fees, temporary suspension of Company 401k match, travel reductions, and reductions to select professional services. The Board recently reauthorized the Company 401k match effective as of October 1, 2024.

On November 5, 2024, the Company announced the entry into definitive agreements for the immediate exercise of certain outstanding warrants issued by the Company on April 30, 2024 (collectively, the “Existing Warrants”) to purchase up to an aggregate of 1,832,517 shares of the Company’s common stock at their current exercise price of \$2.10 per share for total gross proceeds of approximately \$3.8 million, prior to deducting inducement agent fees and estimated offering expenses. An additional \$1.3 million of gross proceeds was received through the exercise of warrants over the last week in accordance with their original terms. In consideration for the immediate exercise of the Existing Warrants, the Company will issue Series I common stock purchase warrants (the “Series I Warrants”) and Series II common stock purchase warrants (the “Series II Warrants”) to purchase up to an aggregate of 3,665,034 shares of common stock. The Series I Warrants will have an exercise price of \$1.94, will be exercisable six (6) months from the date of issuance, and will have a term of five (5) years from the date of exercisability. The Series II Warrants will have an exercise price of \$1.94, will be exercisable six (6) months from the date of issuance, and will have a term of two (2) years from the date of exercisability. The Series I Warrants and Series II Warrants are fixed priced and do not contain any variable pricing features. The Series I Warrants and Series II Warrants described above were offered in a private placement pursuant to an applicable exemption from the registration requirements under Section 4(a)(2) of the Securities Act of 1933 (the “Securities Act”), and, along with the shares of common stock issuable upon their exercise, have not been registered under the Securities Act, and may not be offered or sold in the United States absent registration with the Securities and Exchange Commission (the “SEC”) or an applicable exemption from such registration requirements. The securities were offered only to accredited investors. The Company has agreed to file a registration statement with the SEC covering the resale of the shares of common stock issuable upon exercise of the Series I Warrants and Series II Warrants.

We believe that our existing capital resources will be sufficient to support our operating plan through May 31, 2025; however, there can be no assurance of this. We will likely seek to raise additional capital to support our growth or other strategic initiatives through debt, equity, or a combination thereof. There can be no assurance the Company will be successful in raising additional capital. .

NEW ACCOUNTING PRONOUNCEMENTS

The Company has considered all recent accounting pronouncements issued and their potential effects on its financial statements. The Company's management believes that these recent pronouncements will not have a material effect on the Company's condensed financial statements.

FINANCIAL OVERVIEW

We are a medical device company focused on commercializing the Aquadex System for ultrafiltration treatment of patients with fluid overload who have failed diuretic therapy. Activities since inception have consisted principally of raising capital, performing research and development, and conducting pre-clinical and clinical studies. During 2016, we acquired the Aquadex Business and announced that we were halting all clinical evaluations of our prior technology, the C-Pulse System. Since then, our activities have consisted mainly of expanding our sales and marketing capabilities, performing clinical research, and engaging in new product development. Since the company’s inception and as of September 30, 2024, we had an accumulated deficit of \$297.3 million, and we expect to incur losses for the foreseeable future. To date, we have been funded by public and private equity financings and debt. Although we believe that we will be able to continue to successfully fund our operations, there can be no assurance that we will be able to do so or that we will ever operate profitably.

Results of Operations**Comparison of three months ended September 30, 2024 to three months ended September 30, 2023****Net Sales***(in thousands)*

Three months ended September 30, 2024	Three months ended September 30, 2023	Increase (Decrease)	% Change
\$ 2,367	\$ 2,412	\$ (45)	(1.9)%

Revenue is generated mainly from the sale of disposable blood filters and catheters used in conjunction with the Aquadex System consoles. We sell primarily in the United States to hospitals and clinics through our direct salesforce. We sell outside of the United States to independent specialty distributors, who in turn sell to hospitals and clinics in their geographic regions. The decrease in sales in the current year period is due to a decrease in circuit and console sales offset by a one-time increase in SeaStar Medical Quelimune sales in the current year quarter.

Costs and Expenses

Our costs and expenses were as follows:

(in thousands)

	Three months ended September 30, 2024	Three months ended September 30, 2023	Increase (Decrease)	% Change
Cost of goods sold	\$ 711	\$ 1,031	\$ (320)	(31.0)%
Selling, general and administrative	\$ 2,702	\$ 3,428	\$ (726)	(21.2)%
Research and development	\$ 486	\$ 1,117	\$ (631)	(56.5)%

Cost of Goods Sold

The decrease in cost of goods sold for the three months ended September 30, 2024, compared to the three months ended September 30, 2023, was due primarily to higher manufacturing volumes of circuits in the current year period and lower fixed overhead manufacturing expenses.

Selling, General and Administrative

The decrease in selling, general and administrative expense was primarily realized through efficiency initiatives enacted in the second half of 2023.

Research and Development

The decrease in R&D expenses was primarily driven by reduced consulting fees and compensation-related expenses.

Comparison of nine months ended September 30, 2024 to nine months ended September 30, 2023**Net Sales***(in thousands)*

Nine months ended September 30, 2024	Nine months ended September 30, 2023	Increase (Decrease)	% Change
\$ 6,418	\$ 6,313	\$ 105	1.7%

Revenue is generated mainly from the sale of disposable blood filters and catheters used in conjunction with the Aquadex system consoles. We sell primarily in the United States to hospitals and clinics through our direct salesforce. We sell outside of the United States to independent specialty distributors who in turn sell to hospitals and clinics in their geographic regions. The increase in sales in the current year period is due to a 3% increase in circuit sales, reflecting continued increases in the number of patients treated with the Aquadex therapy, and a one-time increase in SeaStar Medical Quelimune sales offset by a decrease in console sales.

Costs and Expenses

Our costs and expenses were as follows:

<i>(in thousands)</i>	Nine months ended September 30, 2024	Nine months ended September 30, 2023	Increase (Decrease)	% Change
Cost of goods sold	\$ 2,097	\$ 2,718	\$ (621)	(22.8)%
Selling, general and administrative	\$ 10,544	\$ 13,582	\$ (3,038)	(22.4)%
Research and development	\$ 2,378	\$ 4,050	\$ (1,672)	(41.3)%

Cost of Goods Sold

The decrease in cost of goods sold for the nine months ended September 30, 2024, compared to the nine months ended September 30, 2023, was primarily due to higher manufacturing volumes of circuits in the current year period and lower fixed overhead manufacturing expenses.

Selling, General and Administrative

The decrease in selling, general and administrative expense was primarily realized through efficiency initiatives enacted in the second half of 2023.

Research and Development

The decrease in R&D expense versus the prior year was primarily driven by reduced consulting fees and compensation-related expenses.

Liquidity and Capital Resources**Sources of Liquidity**

We have funded our operations primarily through cash on hand and a series of equity issuances.

In March 2023, the Company filed a Prospectus Supplement to its Registration Statement on Form S-3 with the SEC in connection with a proposed At-the-Market Securities offering (the "At-the-Market Program"). During 2023, the Company issued 18,781 shares of common stock under the At-the-Market Program for gross proceeds of approximately \$2.3 million. Net proceeds totaled approximately \$2.1 million after deducting the underwriting discounts and commissions and other costs associated with the offering. The Company terminated its At-the-Market Program in July of 2024.

On October 17, 2023, the Company closed on a public offering of 4,286 Units, with each Unit consisting of one share of the Company's Series J Convertible Redeemable Preferred Stock, par value \$0.0001 per share, with a liquidation preference of \$25.00 per share (the "Series J Convertible Preferred Stock"), and one October 2023 Warrant to purchase one-half of one (0.50) share of Series J Convertible Preferred Stock.

The purchase price for one Unit was \$15.00, which reflects the issuance of the Series J Convertible Preferred Stock with an original issue discount. The Series J Convertible Preferred Stock has a term of three (3) years and is convertible at the option of the holder at any time into shares of the Company's common stock at a conversion price of \$1.01.

If any shares of our Series J Convertible Preferred Stock are outstanding at the end of the three-year term, then the Company will promptly redeem all of such outstanding shares of Series J Convertible Preferred Stock on a *pro rata* basis among all of the holders of Series J Convertible Preferred Stock commencing on the Mandatory Redemption Date in cash, to the extent legally permissible under Delaware law, or, if redemption for cash is not legally permissible in duly authorized, validly issued, fully paid and non-assessable shares of the Company's common stock equal in number to the quotient obtained by dividing such unpaid amount by the closing price of the Company's common stock on the Nasdaq on the Mandatory Redemption Date.

Dividends on the Series J Convertible Preferred Stock will be paid, if and when declared by the Company's board of directors, in-kind ("PIK dividends") in additional shares of Series J Convertible Preferred Stock based on the stated value of \$25.00 per share at a dividend rate of 5.0%. The PIK dividends will be paid on a quarterly basis for three (3) years following the closing date to holders of the Series J Convertible Preferred Stock of record at the close of business on October 31, January 31, April 30, and July 31 of each year.

The October 2023 Warrants have a term of three (3) years. Each October 2023 Warrant has an exercise price of \$262.50 (50.0% of the public offering price per Unit) per one-half of one share (0.5) of Series J Convertible Preferred Stock and is immediately exercisable.

The gross proceeds before underwriting discounts and commissions and offering expenses, were approximately \$2.25 million. The Company intends to use the net proceeds from the offering for working capital and for general corporate purposes.

On April 30, 2024, the Company closed on an underwritten public offering of 321,417 shares of its common stock (or pre-funded warrants in lieu thereof) and warrants to purchase up to an aggregate of 482,146 shares of its common stock at a combined public offering price \$0.24 per share (or pre-funded warrant in lieu thereof) and associated warrant. Each share of common stock (or prefunded warrant in lieu thereof) was sold together with one warrant to purchase one and a half shares of common stock. The warrants have an exercise price of \$14.00 per share, are exercisable immediately upon issuance, and will expire five years following the date of issuance. Each whole common warrant entitles the holder thereof to purchase one share of common stock.

The common warrants contain a reset of the exercise price, to a price equal to the lesser of (i) the then exercise price, (ii) the lowest volume weighted average price for the five trading days immediately following the date we effect a reverse stock split in the future and (iii) if we effect a reverse stock split prior to obtaining the Warrant Stockholder Approval, the lowest volume weighted average price for the five trading days immediately following the date we obtain the Warrant Stockholder Approval. The Company secured the Warrant Stockholder Approval on June 6, 2024. Upon such a reset, there will be a proportionate adjustment to the number of shares underlying the common warrants. In addition, the common warrants will provide for full ratchet anti-dilution adjustment to the exercise price and number of shares underlying the common warrants upon our issuance of our common stock or common stock equivalents at a price per share that is less than the exercise price of the common warrants, subject to certain exemptions. In no event will the exercise price of the common warrants with respect to either adjustment be reduced below a floor price of \$0.06.

The gross proceeds to the Company from the offering, before deducting the placement agent fees and other offering expenses were approximately \$2.7 million.

On July 24, 2024, the Company announced that it had entered into a definitive securities purchase agreement with certain institutional investors for the purchase and sale of 469,340 shares of the Company's common stock at a price of \$4.24 per share of common stock in a registered direct offering priced at-the-market under Nasdaq rules.

In addition, in a concurrent private placement, the Company issued warrants to the investors to purchase up to 938,680 shares of common stock. The warrants have an exercise price of \$3.99 per share, are exercisable immediately following the date of issuance and will have a term of five years from the date of issuance.

The closing of the registered direct offering and the concurrent private placement occurred on or about July 25, 2024.

The gross proceeds to Nuwellis from the registered direct offering and the concurrent private placement, before deducting the placement agent fees and other offering expenses payable by the Company, were approximately \$2.0 million. Nuwellis intends to use the net proceeds from the offering for working capital and for general corporate purposes.

On August 23, 2024, the Company entered into a placement agency agreement with Ladenburg Thalmann & Co. Inc. and a securities purchase agreement with certain purchasers pursuant to which the Company agreed to sell, in a registered direct offering, an aggregate of 483,351 shares of the Company's common stock, \$0.0001 par value per share, at a purchase price of \$1.8450 per Share and accompanying Common Warrant.

The Shares were sold pursuant to the Company's effective shelf registration statement on Form S-3 (File No. 333-280647), including a base prospectus contained therein, which was originally filed with the Securities and Exchange Commission (the "SEC") on July 1, 2024, and was declared effective by the SEC on July 9, 2024, and a related prospectus supplement, dated August 23, 2024, related to the Registered Offering.

Pursuant to the Purchase Agreement, in a concurrent private placement the Company also agreed to sell and issue to the Purchasers, warrants to purchase up to 483,351 shares of Common Stock. The Common Warrants have an exercise price of \$1.72 per share, are immediately exercisable and expire on the fifth anniversary on the effective date of the registration statement to be filed for the purpose of registering the Common Warrant Shares.

The gross proceeds of the Offering, before deducting the Placement Agent's fees and expenses and other offering expenses payable by the Company and excluding the net proceeds, if any, from the exercise of the Common Warrants or Placement Agent Warrants, were approximately \$892,000. The Offering closed on August 26, 2024. The Company also issued to the Placement Agent, or its designees, warrants to purchase up to 14,501 shares of our Common Stock as part of the compensation payable to the Placement Agent in connection with this offering. The Placement Agent Warrants are not registered pursuant to the prospectus supplement and the accompanying prospectus. The Placement Agent Warrants have substantially the same terms as the Common Warrants described above, except that the Placement Agent Warrants will have an exercise price of \$3.04425 per share and will expire August 23, 2029.

As of September 30, 2024 and December 31, 2023, cash and cash equivalents were \$1.9 million and \$3.8 million, respectively. Our business strategy and ability to fund our operations in the future depend in part on our ability to grow the Aquadex Business by expanding our salesforce, selling our products to hospitals and other healthcare facilities, and controlling costs. We will need to seek additional financing in the future, which, to date, has been primarily through offerings of our equity securities.

Cash Flows used in Operating Activities

Net cash used in operating activities was \$8.1 million and \$15.2 million for the nine months ended September 30, 2024, and September 30, 2023, respectively. The net cash used in each of these periods primarily reflects the net loss for those periods, partially offset by non-cash charges for stock-based compensation, depreciation and amortization, and revaluation of the warrant liability, and the effects of changes in operating assets and liabilities, including working capital.

Cash Flows provided by (used in) Investing Activities

Net cash provided by (used in) investing activities was (\$37,000) and \$294,000 for the nine months ended September 30, 2024, and 2023, respectively. The cash used in investing activities was for legal costs related to new patent applications in the prior year and for the purchase of manufacturing, laboratory, and office equipment, respectively, in those periods.

Cash Flows provided by Financing Activities

Net cash provided by financing activities was \$6.2 million and \$2.1 million for the nine months ended September 30, 2024, and 2023, respectively. The cash provided by financing activities in the current year period was the result of proceeds received from the April 2024, July 2024, and August 2024 financings and from the exercise of warrants from the October 2023 and April 2024 financings. The cash provided by financing activities in the prior year period was the result of proceeds received from our 2023 At-The-Market program.

Capital Resource Requirements

As of September 30, 2024, we did not have any material commitments for capital expenditures.

Forward-Looking Statements and Risk Factors

Certain statements in this Quarterly Report on Form 10-Q are forward-looking statements within the meaning of the safe harbor provisions of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended (“Exchange Act”), that are based on management’s beliefs, assumptions and expectations and information currently available to management. All statements that address future operating performance, events or developments that we expect or anticipate will occur in the future are forward-looking statements, including without limitation, business development, and employees, our ability to execute on our strategic realignments, our post-market clinical data collection activities, benefits of our products to patients, our expectations with respect to product development and commercialization efforts, our ability to increase market and physician acceptance of our products, potentially competitive product offerings, the possibility that we may be unable to raise sufficient funds necessary for our anticipated operations, intellectual property protection, and other risks and uncertainties described in our filings with the SEC. In some cases, you can identify forward-looking statements by the following words: “anticipate,” “believe,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “ongoing,” “plan,” “potential,” “predict,” “project,” “should,” “will,” “would” or the negative of these terms or other comparable terminology, although not all forward-looking statements contain these words. Management believes that these forward-looking statements are reasonable as and when made. However, you should not place undue reliance on forward-looking statements because they speak only as of the date when made. We undertake no obligation to revise any forward-looking statements in order to reflect events or circumstances that might subsequently arise. Forward-looking statements are subject to a number of risks and uncertainties that could cause actual events to adversely differ from the expectations indicated in these forward-looking statements, including without limitation, the risks and uncertainties described in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, in other reports filed thereafter with the SEC, which risk factors may be updated from time to time, and in this Quarterly Report on Form 10-Q for the quarter ended September 30, 2024. We operate in an evolving environment. New risk factors and uncertainties may emerge from time to time, and it is not possible for us to predict all risk factors and uncertainties. We may not actually achieve the plans, projections or expectations disclosed in forward-looking statements, and actual results, developments or events could differ materially from those disclosed in the forward-looking statements. Forward-looking statements are subject to a number of risks and uncertainties, including without limitation, the possibility that regulatory authorities do not accept our application or approve the marketing of our products, the possibility we may be unable to raise the funds necessary for the development and commercialization of our products, and those described in our filings with the SEC.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not applicable.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our Exchange Act reports is recorded, processed, summarized and reported within the time periods specified in the SEC rules and forms and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Principal Financial Officer (together, the “Certifying Officers”), as appropriate to allow for timely decisions regarding required disclosure.

In designing and evaluating disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable, not absolute, assurance of achieving the desired objectives. Also, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty and that breakdowns can occur because of simple error or mistake. The design of any system of controls is based, in part, upon certain assumptions about the likelihood of future events and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions.

As of September 30, 2024, the end of the period covered by this report, we conducted an evaluation, under the supervision and with the participation of management, including the Certifying Officers, 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) of the Exchange Act. Our disclosure controls and procedures are designed to provide reasonable assurance of achieving their stated objectives. Based on their evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were not effective at a reasonable assurance level as of September 30, 2024. The Certifying Officers based their conclusion on the fact that the Company has identified two material weaknesses in controls over financial reporting, as detailed in the 2023 Annual Report on Form 10-K. In light of this fact, management expects to perform additional analyses, reconciliations, and remediations.

Changes in Internal Controls over Financial Reporting

There was no change in our internal control over financial reporting during our most recently completed fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting. However, as a result of the identified material weaknesses, changes in our internal control over financial reporting will occur.

PART II—OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

None.

ITEM 1A. RISK FACTORS

You should carefully consider the risks and uncertainties we describe in our Annual Report on Form 10-K for the year ended December 31, 2023, and in other reports filed thereafter with the SEC, before deciding to invest in or retain shares of our common stock. Other than set forth below, there have been no material changes to the Risk Factors previously disclosed in our Annual Report on Form 10-K for the year ended December 31, 2023.

Risk Related to our Common Stock

Nasdaq may delist our common stock from its exchange which could limit your ability to make transactions in our securities and subject us to additional trading restrictions.

Our common stock is listed on the Nasdaq Capital Market under the symbol “NUWE”. In order to maintain that listing, we must satisfy minimum financial and other requirements including, without limitation, the minimum stockholders’ equity requirement and the minimum bid price requirement. There can be no assurances that we will be successful in maintaining, or if we fall out of compliance, in regaining compliance with the continued listing requirements and maintaining the listing of our common stock on the NASDAQ Capital Market. On December 7, 2023, we received a notice from Nasdaq (the “Notice”) informing us that because the closing bid price for our Common Stock was below \$1.00 for 30 consecutive trading days, we were not in compliance with the minimum bid price requirement for continued listing on Nasdaq, as set forth in Nasdaq Marketplace Rule 5550(a)(2) (the “Minimum Bid Price Requirement”).

In accordance with Nasdaq Marketplace Rule 5810(c)(3)(A), we were granted a period of 180 calendar days from December 7, 2023, or until June 4, 2024, to regain compliance with the Minimum Bid Price Requirement. Subsequently, on May 23, 2024, we received a letter from the Listing Qualifications Staff (the “Staff”) informing the Company that it was not in compliance with the minimum stockholders’ equity requirement for continued listing on Nasdaq, under Listing Rule 5550(b)(1) (the “Stockholder’s Equity Requirement”), because the Company’s stockholders’ equity of \$885,000, as reported in the Company’s Quarterly Report on Form 10-Q for the period ended March 31, 2024, was below the required minimum of \$2.5 million, and because, as of May 23, 2024, the Company did not meet the alternative compliance standards, relating to the market value of listed securities of \$35 million or net income from continuing operations of \$500,000 in the most recently completed fiscal year or in two of the last three most recently completed fiscal years.

As a result, on June 5, 2024, we received a letter from Nasdaq indicating the Company’s continued non-compliance with Nasdaq Marketplace Rule 5550(a)(2) (the “Letter”). The Letter further informed the Company that the Common Stock would be delisted from Nasdaq unless the Company appeals the Staff’s delisting determination by requesting a hearing before the Nasdaq Hearings Panel (the “Panel”). The Company’s requested a hearing to request additional time to meet the Stockholder Equity Requirement which stayed any further delisting action by the Staff pending the ultimate outcome of the hearing. The Common Stock will remain listed and eligible for trading on Nasdaq at least pending the ultimate conclusion of the hearing process.

On June 27, 2024, we effected a 1-for-35 reverse stock split of our outstanding Common Stock. Additionally, in 2020, the SEC approved a Nasdaq rule change to expedite delisting of securities of companies that have had one or more reverse stock splits with a cumulative ratio of one for 250 or more shares over the prior two-year period. Under the new rules, if a company falls out of compliance with the \$1.00 minimum bid price after completing reverse stock splits over the immediately preceding two years that cumulatively result in a ratio one for 250 shares, the company will not be able to avail itself of any compliance periods and Nasdaq will instead require the issuance of a Staff delisting determination, which is appealable to a hearings panel. Our ability to remain listed on Nasdaq may be negatively impacted by this Nasdaq rule.

On July 18, 2024, the Company received a letter from the Staff informing the Company that it had regained compliance with the Minimum Bid Price Requirement, but that because it was still non-compliant with the Stockholder’s Equity Requirement the hearing would continue as scheduled as to the matter of the Stockholder’s Equity Requirement.

On July 23, 2024, the Company addressed the Panel and presented its plan of compliance for the Stockholder’s Equity Requirement.

On August 8, 2024, the Company was notified by Nasdaq that the Panel had granted the Company’s request for continued listing, subject to, among other things, the Company’s filing of its Quarterly Report on Form 10-Q for the period ending September 30, 2024, evidencing compliance with the Stockholder’s Equity Requirement.

There can be no assurance the Panel will grant any request for continued listing or that the Company will be able to regain compliance with the applicable listing criteria within the period of time that may be granted by the Panel.

If our Common Stock is delisted from Nasdaq, our ability to raise capital through public offerings of our securities and to finance our operations could be adversely affected. We also believe that delisting would likely result in decreased liquidity and/or increased volatility in our Common Stock and could harm our business and future prospects. In addition, we believe that, if our Common Stock is delisted, our stockholders would likely find it more difficult to obtain accurate quotations as to the price of the Common Stock and it may be more difficult for stockholders to buy or sell our Common Stock at competitive market prices, or at all.

If our Common Stock is delisted, our Common Stock would likely then trade only in the over-the-counter market. If our Common Stock were to trade on the over-the-counter market, selling our Common Stock could be more difficult because smaller quantities of shares would likely be bought and sold, transactions could be delayed, and we could face significant material adverse consequences, including: a limited availability of market quotations for our securities; reduced liquidity with respect to our securities; a determination that our shares are a “penny stock,” which will require brokers trading in our securities to adhere to more stringent rules, possibly resulting in a reduced level of trading activity in the secondary trading market for our securities; a reduced amount of news and analyst coverage for us; and a decreased ability to issue additional securities or obtain additional financing in the future. These factors could result in lower prices and larger spreads in the bid and ask prices for our Common Stock and would substantially impair our ability to raise additional funds and could result in a loss of institutional investor interest and fewer development opportunities for us.

In addition to the foregoing, if our Common Stock is delisted from Nasdaq and it trades on the over-the-counter market, the application of the “penny stock” rules could adversely affect the market price of our Common Stock and increase the transaction costs to sell those shares. The SEC has adopted regulations which generally define a “penny stock” as an equity security that has a market price of less than \$5.00 per share, subject to specific exemptions. If our Common Stock is delisted from Nasdaq and it trades on the over-the-counter market at a price of less than \$5.00 per share, our Common Stock would be considered a penny stock. The SEC’s penny stock rules require a broker-dealer, before a transaction in a penny stock not otherwise exempt from the rules, to deliver a standardized risk disclosure document that provides information about penny stocks and the risks in the penny stock market. The broker-dealer must also provide the customer with current bid and offer quotations for the penny stock, the compensation of the broker-dealer and the salesperson in the transaction, and monthly account statements showing the market value of each penny stock held in the customer’s account. In addition, the penny stock rules generally require that before a transaction in a penny stock occurs, the broker-dealer must make a special written determination that the penny stock is a suitable investment for the purchaser and receive the purchaser’s agreement to the transaction. If applicable in the future, these rules may restrict the ability of brokers-dealers to sell our Common Stock and may affect the ability of investors to sell their shares, until our Common Stock no longer is considered a penny stock.

We continue to actively monitor our performance with respect to the listing standards and will consider available options to resolve any deficiency and maintain compliance with the Nasdaq rules. There can be no assurance that we will be able to maintain compliance or, if we fall out of compliance, regain compliance with any deficiency, or if we implement an option that regains our compliance, maintain compliance thereafter.

If we fail to comply with federal and state laws regarding off-label use of our products, we could face substantial civil and criminal penalties and our business, financial condition, results of operations, and prospects could be adversely affected.

Healthcare professionals may choose to use and prescribe medical devices for uses that are not described in the product’s labeling and for uses that differ from those tested in clinical trials and approved or authorized by the regulatory authorities. Medical device companies, however, are prohibited from marketing and promoting products for indications and uses that are not specifically approved or authorized by FDA. Such “off-label” uses are common on the medical world and often are appropriate treatments for some patients. Regulatory authorities in the U.S. generally do not restrict or regulate the treatment choices of healthcare professionals. Regulatory authorities do, however, restrict communications by companies concerning off-label uses of their products. Any FDA approval or marketing authorization that we have or may obtain in the future permits us to promote the subject medical device only for the specific use(s) cleared, approved, certified or otherwise authorized. We are prohibited from marketing or promoting any medical devices for off-label use.

Notwithstanding the regulatory restrictions on off-label promotion, the FDA and other regulatory authorities allow companies to engage in truthful, non-misleading, and non-promotional speech concerning their products. Accordingly, we engage in medical education activities and communicate with healthcare professionals about many aspects of our products and clinical trials. In addition, we are aware that the Aquadex System, which is cleared by FDA solely for use in adults and pediatric patients weighing 20 kg or more, is being used off-label uses to treat patients who weigh under 20 kg, including being modified by children’s hospitals so that it can provide dialysis to neonates and other premature infants who were born either without kidneys or without normal kidney function. These patients typically have very few other treatment options given the large extracorporeal blood volume required by standard dialysis machines, the need for blood priming of the dialysis circuit and the use of large catheters.

Although we believe that all of our communications regarding off-label uses are in compliance with the relevant regulatory requirements, the FDA or another regulatory authority may disagree, and characterize such communications as marketing and promotion of an off-label use.

If the FDA determines that we have marketed or promoted our products for off-label use by us or our commercial partners, it could request that we or our commercial partners modify those promotional materials. We also could be subject to regulatory or enforcement actions, including the issuance of an untitled letters or warning letters, injunctions, seizures, civil fines and criminal penalties.

In addition to FDA, we may be subject to significant enforcement actions from other federal and state enforcement authorities, such as the Department of Justice and the Office of the Inspector General of the Department of Health and Human Services, if they consider our communications, including promotional and training materials, to constitute promotion of an uncleared, uncertified or unapproved use of a medical device. In the U.S., engaging in the impermissible promotion of our products, following approval, for off-label uses can also subject us to false claims and other litigation under federal and state statutes, including fraud and abuse and consumer protection laws, which can lead to civil and criminal penalties and fines, agreements with governmental authorities that materially restrict the manner in which we promote or distribute therapeutic products and do business through, for example, corporate integrity agreements, suspension or exclusion from participation in federal and state healthcare programs, and debarment from government contracts and refusal of future orders under existing contracts. These laws include the federal False Claims Act, which allows any individual to bring a lawsuit against a company on behalf of the federal government alleging submission of false or fraudulent claims or causing others to present such false or fraudulent claims, for payment by a federal program such as Medicare or Medicaid. If the government decides to intervene and prevails in the lawsuit, the individual will share in the proceeds from any fines or settlement funds. If the government declines to intervene, the individual may pursue the case alone. Many False Claims Act lawsuits against, and preceding investigations of, manufacturers of healthcare products are brought every year, leading to several substantial civil and criminal settlements related to off-label uses. In addition, False Claims Act lawsuits may expose manufacturers to follow-on claims by private payors based on fraudulent marketing practices. This growth in litigation has increased the risk that a company will have to defend a false claim action, pay settlement fines or restitution, as well as criminal and civil penalties, agree to comply with burdensome reporting and compliance obligations, and be excluded from Medicare, Medicaid, or other federal and state healthcare programs. If we or our collaborators do not lawfully promote our approved products, we may become subject to such investigations and litigation and, if we do not successfully defend against such actions, those actions may have a material adverse effect on our business, financial condition, results of operations and prospects.

Additionally, we must have adequate substantiation for the claims we make for our products and services. If any of our claims are determined to be false, misleading or deceptive, our products and services could be considered misbranded under the FDCA or in violation of the Federal Trade Commission Act. We could also face lawsuits from our competitors under the Lanham Act alleging that our marketing materials are false or misleading.

Foreign jurisdictions have their own laws and regulations concerning medical devices, including marketing authorizations and certifications, communications about off-label uses, and substantiation of advertising and promotional claims. Failure to comply with those laws and regulations could result in actions against us, including fines, penalties and exclusion from the market. Any such actions could adversely affect our ability to market new products and services or continue to market existing products and services in those jurisdictions.

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

On August 23, 2024, the Company entered into a placement agency agreement with Ladenburg Thalmann & Co. Inc. and a securities purchase agreement with certain purchasers pursuant to which the Company agreed to sell, in a registered direct offering, an aggregate of 483,351 shares of the Company's common stock, \$0.0001 par value per share, at a purchase price of \$1.8450 per Share and accompanying Common Warrant.

The Shares were sold pursuant to the Company's effective shelf registration statement on Form S-3 (File No. 333-280647), including a base prospectus contained therein, which was originally filed with the Securities and Exchange Commission (the "SEC") on July 1, 2024, and was declared effective by the SEC on July 9, 2024, and a related prospectus supplement, dated August 23, 2024, related to the Registered Offering.

Pursuant to the Purchase Agreement, in a concurrent private placement the Company also agreed to sell and issue to the Purchasers, warrants to purchase up to 483,351 shares of Common Stock. The Common Warrants have an exercise price of \$1.72 per share, are immediately exercisable and expire on the fifth anniversary on the effective date of the registration statement to be filed for the purpose of registering the Common Warrant Shares.

The gross proceeds of the Offering, before deducting the Placement Agent's fees and expenses and other offering expenses payable by the Company and excluding the net proceeds, if any, from the exercise of the Common Warrants or Placement Agent Warrants, were approximately \$892,000. The Offering closed on August 26, 2024. The Company also issued to the Placement Agent, or its designees, warrants to purchase up to 14,501 shares of our Common Stock as part of the compensation payable to the Placement Agent in connection with this offering. The Placement Agent Warrants are not registered pursuant to the prospectus supplement and the accompanying prospectus. The Placement Agent Warrants have substantially the same terms as the Common Warrants described above, except that the Placement Agent Warrants will have an exercise price of \$3.04425 per share and will expire August 23, 2029.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

Not applicable.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

None.

ITEM 6. EXHIBITS

The exhibits filed as part of this Quarterly Report on Form 10-Q are listed in the Exhibit Index below.

Exhibit Index
Nuwellis, Inc.
Form 10-Q for the Quarterly Period Ended September 30, 2024

Exhibit Number	Exhibit Description	Incorporated By Reference			Exhibit Number	Filed Herewith	Furnished Herewith
		Form	File Number	Date of First Filing			
3.1	Fourth Amended and Restated Certificate of Incorporation	10	001-35312	February 1, 2012	3.1		
3.2	Certificate of Amendment to the Fourth Amended and Restated Certificate of Incorporation	8-K	001-35312	January 13, 2017	3.1		
3.3	Certificate of Amendment to the Fourth Amended and Restated Certificate of Incorporation	8-K	001-35312	May 23, 2017	3.1		
3.4	Certificate of Amendment to the Fourth Amended and Restated Certificate of Incorporation	8-K	001-35312	October 12, 2017	3.1		
3.5	Certificate of Amendment to the Fourth Amended and Restated Certificate of Incorporation	8-K/A	001-35312	October 16, 2020	3.1		
3.6	Certificate of Amendment to the Fourth Amended and Restated Certificate of Incorporation	8-K	001-35312	January 2, 2019	3.1		
3.7	Certificate of Amendment to the Fourth Amended and Restated Certificate of Incorporation	8-K	001-35312	April 27, 2021	3.1		
3.8	Certificate of Amendment to the Fourth Amended and Restated Certificate of Incorporation	8-K	001-35312	December 9, 2022	3.1		
3.9	Certificate of Amendment to Fourth Amended and Restated Certificate of Incorporation	8-K	001-35312	June 26, 2024	3.1		
3.10	Form of Certificate of Designation of Preferences, Rights and Limitations of Series F Convertible Preferred Stock	S-1/A	333-221010	November 17, 2017	3.7		
3.11	Certificate of Designation of Preferences, Rights and Limitations of Series J Convertible Preferred Stock	8-K	001-35312	October 17, 2023	3.1		
3.12	Second Amended and Restated Bylaws	8-K	001-35312	April 27, 2021	3.2		

Exhibit Number	Exhibit Description	Incorporated By Reference			Exhibit Number	Filed Herewith	Furnished Herewith
		Form	File Number	Date of First Filing			
3.13	Third Amended and Restated Bylaws					X	
3.14	Amendment to Third Amended and Restated Bylaws					X	
4.1	Form of Common Warrant	8-K	001-35312	July 25, 2024	4.1		
4.2	Form of Common Warrant	8-K	001-35312	August 26, 2024	4.1		
4.3	Form of Placement Agent Warrant	8-K	001-35312	August 26, 2024	4.2		
10.1	Form of Securities Purchase Agreement	8-K	001-35312	July 25, 2024	10.2		
10.2	Placement Agency Agreement dated July 24, 2024 between Nuwellis, Inc. and Roth Capital Partners LLC	8-K	001-35312	July 25, 2024	10.1		
10.3	Termination Agreement to the Supply and Collaboration Agreement, dated August 21, 2024	8-K	001-35312	August 22, 2024	10.1		
10.4	Placement Agency Agreement dated as of August 23, 2024, by and between Nuwellis, Inc., and Ladenburg Thalmann & Co. Inc.	8-K	001-35312	August 26, 2024	10.1		
10.5	Form of Securities Purchase Agreement	8-K	001-35312	July 25, 2024	10.69		
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X	
31.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X	
32.1	Certification of Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002						X
32.2	Certification of Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002						X
101.INS	Inline XBRL Instance Document					X	
101.SCH	Inline XBRL Taxonomy Extension Schema Document					X	
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document					X	

Exhibit Number	Exhibit Description	Incorporated By Reference			Exhibit Number	Filed Herewith	Furnished Herewith
		Form	File Number	Date of First Filing			
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document					X	
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document					X	
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document					X	
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)					X	

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.

Nuwellis, Inc.

Date: November 12, 2024

By: /s/ Nestor Jaramillo, Jr.

Nestor Jaramillo, Jr.
President and Chief Executive Officer

Date: November 12, 2024

By: /s/ Robert Scott

Robert Scott
Chief Financial Officer

THIRD AMENDED AND RESTATED BYLAWS

OF

NUWELLIS, INC.
(A DELAWARE CORPORATION)

TABLE OF CONTENTS

ARTICLE I OFFICES	3
1. REGISTERED OFFICE.	3
2. OTHER OFFICES.	3
ARTICLE II CORPORATE SEAL	3
3. CORPORATE SEAL.	3
ARTICLE III STOCKHOLDERS' MEETINGS	3
4. PLACE OF MEETINGS.	3
5. ANNUAL MEETINGS.	3
6. SPECIAL MEETINGS.	6
7. NOTICE OF MEETINGS.	7
8. QUORUM.	7
9. ADJOURNMENT AND NOTICE OF ADJOURNED MEETINGS.	8
10. VOTING RIGHTS.	8
11. JOINT OWNERS OF STOCK.	8
12. LIST OF STOCKHOLDERS.	8
13. ACTION WITHOUT MEETING.	8
14. ORGANIZATION.	9
ARTICLE IV DIRECTORS	9
15. NUMBER AND TERM OF OFFICE.	9
16. POWERS.	9
17. CLASSES OF DIRECTORS.	9
18. VACANCIES.	10
19. RESIGNATION.	10
20. REMOVAL.	10
21. MEETINGS.	10
22. QUORUM AND VOTING.	11
23. ACTION WITHOUT MEETING.	11
24. FEES AND COMPENSATION.	11
25. COMMITTEES.	12
26. LEAD INDEPENDENT DIRECTOR.	12
27. ORGANIZATION.	13
28. DUTIES OF CHAIRMAN OF THE BOARD OF DIRECTORS.	13
ARTICLE V OFFICERS	13
29. OFFICERS DESIGNATED.	13

30.	TENURE AND DUTIES OF OFFICERS.	13
31.	DELEGATION OF AUTHORITY.	14
32.	RESIGNATIONS.	14
33.	REMOVAL.	15
ARTICLE VI EXECUTION OF CORPORATE INSTRUMENTS AND VOTING OF SECURITIES OWNED BY THE CORPORATION		15
34.	EXECUTION OF CORPORATE INSTRUMENTS.	15
35.	VOTING OF SECURITIES OWNED BY THE CORPORATION.	15
ARTICLE VII SHARES OF STOCK		15
36.	FORM AND EXECUTION OF CERTIFICATES.	15
37.	LOST CERTIFICATES.	15
38.	TRANSFERS.	16
39.	FIXING RECORD DATES.	16
40.	REGISTERED STOCKHOLDERS.	16
ARTICLE VIII OTHER SECURITIES OF THE CORPORATION		16
41.	EXECUTION OF OTHER SECURITIES.	16
ARTICLE IX DIVIDENDS		17
42.	DECLARATION OF DIVIDENDS.	17
43.	DIVIDEND RESERVE.	17
ARTICLE X FISCAL YEAR		17
44.	FISCAL YEAR.	17
ARTICLE XI INDEMNIFICATION		17
45.	INDEMNIFICATION OF DIRECTORS, OFFICERS, EMPLOYEES AND OTHER AGENTS.	17
ARTICLE XII NOTICES		20
46.	NOTICES.	20
ARTICLE XIII AMENDMENTS		20
47.	AMENDMENTS.	21
ARTICLE XIV LOANS TO OFFICERS OR EMPLOYEES		21
48.	LOANS TO OFFICERS OR EMPLOYEES.	21
ARTICLE XV AUSTRALIAN SECURITIES EXCHANGE LISTING RULES		21
49.	AUSTRALIAN SECURITIES EXCHANGE LISTING RULES.	21

THIRD AMENDED AND RESTATED BYLAWS

OF

**NUWELLIS, INC.
(A DELAWARE CORPORATION)**

**ARTICLE I
OFFICES**

1. REGISTERED OFFICE. The registered office of the corporation in the State of Delaware shall be in the City of Wilmington, County of New Castle.

2. OTHER OFFICES. The corporation shall also have and maintain an office or principal place of business at such place as may be fixed by the Board of Directors, and may also have offices at such other places, both within and without the State of Delaware as the Board of Directors may from time to time determine or the business of the corporation may require.

**ARTICLE II
CORPORATE SEAL**

3. CORPORATE SEAL. The Board of Directors may adopt a corporate seal. The corporate seal shall consist of a die bearing the name of the corporation and the inscription, "Corporate Seal-Delaware." Such seal may be used by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise.

**ARTICLE III
STOCKHOLDERS' MEETINGS**

4. PLACE OF MEETINGS. Meetings of the stockholders of the corporation may be held at such place, either within or without the State of Delaware, as may be determined from time to time by the Board of Directors. The Board of Directors may, in its sole discretion, determine that the meeting shall not be held at any place, but may instead be held solely by means of remote communication as provided under the Delaware General Corporation Law (the "**DGCL**").

5. ANNUAL MEETINGS.

(a) The annual meeting of the stockholders of the corporation, for the purpose of election of directors and for such other business as may properly come before it, shall be held on such date and at such time as may be designated from time to time by the Board of Directors. Nominations of persons for election to the Board of Directors of the corporation and the proposal of business to be considered by the stockholders may be made at an annual meeting of stockholders: (i) pursuant to the corporation's notice of meeting of stockholders (with respect to business other than nominations); (ii) brought specifically by or at the direction of the Board of Directors; or (iii) by any stockholder of the corporation who was a stockholder of record at the time of giving the stockholder's notice provided for in Section 5(b) below, who is entitled to vote at the meeting and who complied with the notice procedures set forth in Section 5. For the avoidance of doubt, clause (iii) above shall be the exclusive means for a stockholder to make nominations and submit other business (other than matters properly included in the corporation's notice of meeting of stockholders and proxy statement under Rule 14a-8 under the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder (the "**1934 Act**")) before an annual meeting of stockholders.

(b) At an annual meeting of the stockholders, only such business shall be conducted as is a proper matter for stockholder action under Delaware law and as shall have been properly brought before the meeting.

(i) For nominations for the election to the Board of Directors to be properly brought before an annual meeting by a stockholder pursuant to clause (iii) of Section 5(a) of these Third Amended and Restated Bylaws (the “*Bylaws*”), the stockholder must deliver written notice to the Secretary at the principal executive offices of the corporation on a timely basis as set forth in Section 5(b)(iii) and must update and supplement such written notice on a timely basis as set forth in Section 5(c). Such stockholder’s notice shall set forth: (A) as to each nominee such stockholder proposes to nominate at the meeting: (1) the name, age, business address and residence address of such nominee, (2) the principal occupation or employment of such nominee, (3) the class and number of shares of each class of capital stock of the corporation which are owned of record and beneficially by such nominee, (4) the date or dates on which such shares were acquired and the investment intent of such acquisition, and (5) such other information concerning such nominee as would be required to be disclosed in a proxy statement soliciting proxies for the election of such nominee as a director in an election contest (even if an election contest is not involved), or that is otherwise required to be disclosed pursuant to Section 14 of the 1934 Act and the rules and regulations promulgated thereunder (including such person’s written consent to being named as a nominee and to serving as a director if elected); and (B) the information required by Section 5(b)(iv). The corporation may require any proposed nominee to furnish such other information as it may reasonably require to determine the eligibility of such proposed nominee to serve as an independent director of the corporation or that could be material to a reasonable stockholder’s understanding of the independence, or lack thereof, of such proposed nominee.

(ii) Other than proposals sought to be included in the corporation’s proxy materials pursuant to Rule 14(a)-8 under the 1934 Act, for business other than nominations for the election to the Board of Directors to be properly brought before an annual meeting by a stockholder pursuant to clause (iii) of Section 5(a) of these Bylaws, the stockholder must deliver written notice to the Secretary at the principal executive offices of the corporation on a timely basis as set forth in Section 5(b)(iii), and must update and supplement such written notice on a timely basis as set forth in Section 5(c). Such stockholder’s notice shall set forth: (A) as to each matter such stockholder proposes to bring before the meeting, a brief description of the business desired to be brought before the meeting, the reasons for conducting such business at the meeting, and any material interest (including any anticipated benefit of such business to any Proponent (as defined below) other than solely as a result of its ownership of the corporation’s capital stock, that is material to any Proponent individually, or to the Proponents in the aggregate) in such business of any Proponent; and (B) the information required by Section 5(b)(iv).

(iii) To be timely, the written notice required by Section 5(b)(i) or 5(b)(ii) must be received by the Secretary at the principal executive offices of the corporation not later than the close of business on the ninetieth (90th) day nor earlier than the close of business on the one hundred twentieth (120th) day prior to the first anniversary of the preceding year’s annual meeting; provided, however, that, subject to the last sentence of this Section 5(b)(iii), in the event that the date of the annual meeting is advanced more than thirty (30) days prior to or delayed by more than thirty (30) days after the anniversary of the preceding year’s annual meeting, notice by the stockholder to be timely must be so received not earlier than the close of business on the one hundred twentieth (120th) day prior to such annual meeting and not later than the close of business on the later of the ninetieth (90th) day prior to such annual meeting or the tenth (10th) day following the day on which public announcement of the date of such meeting is first made. In no event shall an adjournment or a postponement of an annual meeting for which notice has been given, or the public announcement thereof has been made, commence a new time period for the giving of a stockholder’s notice as described above.

(iv) The written notice required by Section 5(b)(i) or 5(b)(ii) shall also set forth, as of the date of the notice and as to the stockholder giving the notice and the beneficial owner, if any, on whose behalf the nomination or proposal is made (each, a **“Proponent”** and collectively, the **“Proponents”**): (A) the name and address of each Proponent, as they appear on the corporation’s books; (B) the class, series and number of shares of the corporation that are owned beneficially and of record by each Proponent; (C) a description of any agreement, arrangement or understanding (whether oral or in writing) with respect to such nomination or proposal between or among any Proponent and any of its affiliates or associates, and any others (including their names) acting in concert, or otherwise under the agreement, arrangement or understanding, with any of the foregoing; (D) a representation that the Proponents are holders of record or beneficial owners, as the case may be, of shares of the corporation entitled to vote at the meeting and intend to appear in person or by proxy at the meeting to nominate the person or persons specified in the notice (with respect to a notice under Section 5(b)(i)) or to propose the business that is specified in the notice (with respect to a notice under Section 5(b)(ii)); (E) a representation as to whether the Proponents intend to deliver a proxy statement and form of proxy to a sufficient number of holders of the corporation’s voting shares to elect such nominee or nominees (with respect to a notice under Section 5(b)(i)) or to carry such proposal (with respect to a notice under Section 5(b)(ii)); (F) to the extent known by any Proponent, the name and address of any other stockholder supporting the proposal on the date of such stockholder’s notice; and (G) a description of all Derivative Transactions (as defined below) by each Proponent during the previous twelve (12) month period, including the date of the transactions and the class, series and number of securities involved in, and the material economic terms of, such Derivative Transactions.

For purposes of Sections 5 and 6, a **“Derivative Transaction”** means any agreement, arrangement, interest or understanding entered into by, or on behalf or for the benefit of, any Proponent or any of its affiliates or associates, whether record or beneficial:

- (w) the value of which is derived in whole or in part from the value of any class or series of shares or other securities of the corporation,
- (x) which otherwise provides any direct or indirect opportunity to gain or share in any gain derived from a change in the value of securities of the corporation,
- (y) the effect or intent of which is to mitigate loss, manage risk or benefit of security value or price changes, or
- (z) which provides the right to vote or increase or decrease the voting power of, such Proponent, or any of its affiliates or associates, with respect to any securities of the corporation, which agreement, arrangement, interest or understanding may include, without limitation, any option, warrant, debt position, note, bond, convertible security, swap, stock appreciation right, short position, profit interest, hedge, right to dividends, voting agreement, performance-related fee or arrangement to borrow or lend shares (whether or not subject to payment, settlement, exercise or conversion in any such class or series), and any proportionate interest of such Proponent in the securities of the corporation held by any general or limited partnership, or any limited liability company, of which such Proponent is, directly or indirectly, a general partner or managing member.

(c) A stockholder providing written notice required by Section 5(b)(i) or (ii) shall update and supplement such notice in writing, if necessary, so that the information provided or required to be provided in such notice is true and correct in all material respects as of (i) the record date for the meeting and (ii) the date that is five (5) business days prior to the meeting and, in the event of any adjournment or postponement thereof, five (5) business days prior to such adjourned or postponed meeting. In the case of an update and supplement pursuant to clause (i) of this Section 5(c), such update and supplement shall be received by the Secretary at the principal executive offices of the corporation not later than five (5) business days after the record date for the meeting. In the case of an update and supplement pursuant to clause (ii) of this Section 5(c), such update and supplement shall be received by the Secretary at the principal executive offices of the corporation not later than two (2) business days prior to the date for the meeting, and, in the event of any adjournment or postponement thereof, two (2) business days prior to such adjourned or postponed meeting.

(d) Notwithstanding anything in Section 5(b)(iii) to the contrary, in the event that the number of directors in an Expiring Class (as defined below) is increased and there is no public announcement of the appointment of a director to such class, or, if no appointment was made, of the vacancy in such class, made by the corporation at least ten (10) days before the last day a stockholder may deliver a notice of nomination in accordance with Section 5(b) (iii), a stockholder’s notice required by this Section 5 and which complies with the requirements in Section 5(b)(i), other than the timing requirements in Section 5(b)(iii), shall also be considered timely, but only with respect to nominees for any new positions in such Expiring Class created by such increase, if it shall be received by the Secretary at the principal executive offices of the corporation not later than the close of business on the tenth (10th) day following the day on which such public announcement is first made by the corporation. For purposes of this Section, an **“Expiring Class”** shall mean a class of directors whose term shall expire at the next annual meeting of stockholders.

(e) A person shall not be eligible for election or re-election as a director unless the person is nominated either in accordance with clause (ii) of Section 5(a), or in accordance with clause (iii) of Section 5(a). Except as otherwise required by law, the chairman of the meeting shall have the power and duty to determine whether a nomination or any business proposed to be brought before the meeting was made, or proposed, as the case may be, in accordance with the procedures set forth in these Bylaws and, if any proposed nomination or business is not in compliance with these Bylaws, or the Proponent does not act in accordance with the representations in Sections 5(b) (iv)(D) and 5(b)(iv)(E), to declare that such proposal or nomination shall not be presented for stockholder action at the meeting and shall be disregarded, notwithstanding that proxies in respect of such nominations or such business may have been solicited or received.

(f) Notwithstanding the foregoing provisions of this Section 5, in order to include information with respect to a stockholder proposal in the proxy statement and form of proxy for a stockholders' meeting, a stockholder must also comply with all applicable requirements of the 1934 Act and the rules and regulations thereunder. Nothing in these Bylaws shall be deemed to affect any rights of stockholders to request inclusion of proposals in the corporation's proxy statement pursuant to Rule 14a-8 under the 1934 Act; provided, however, that any references in these Bylaws to the 1934 Act or the rules and regulations thereunder are not intended to and shall not limit the requirements applicable to proposals and/or nominations to be considered pursuant to Section 5(a) (iii) of these Bylaws.

(g) For purposes of Sections 5 and 6,

(i) **"public announcement"** shall mean disclosure in a press release reported by the Dow Jones News Service, Associated Press or comparable national news service or in a document publicly filed by the corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the 1934 Act; and

(ii) **"affiliates"** and **"associates"** shall have the meanings set forth in Rule 405 under the Securities Act of 1933, as amended (the **"1933 Act"**).

6. SPECIAL MEETINGS.

(a) Special meetings of the stockholders of the corporation may be called, for any purpose as is a proper matter for stockholder action under Delaware law, by (i) the Chairman of the Board of Directors, (ii) the Chief Executive Officer, or (iii) the Board of Directors pursuant to a resolution adopted by a majority of the total number of authorized directors (whether or not there exist any vacancies in previously authorized directorships at the time any such resolution is presented to the Board of Directors for adoption).

(b) The Board of Directors shall determine the time and place, if any, of such special meeting. Upon determination of the time and place, if any, of the meeting, the Secretary shall cause a notice of meeting to be given to the stockholders entitled to vote, in accordance with the provisions of Section 7 of these Bylaws. No business may be transacted at such special meeting otherwise than specified in the notice of meeting.

(c) Nominations of persons for election to the Board of Directors may be made at a special meeting of stockholders at which directors are to be elected (i) by or at the direction of the Board of Directors or (ii) by any stockholder of the corporation who is a stockholder of record at the time of giving notice provided for in this paragraph, who shall be entitled to vote at the meeting and who delivers written notice to the Secretary of the corporation setting forth the information required by Section 5(b)(i). In the event the corporation calls a special meeting of stockholders for the purpose of electing one or more directors to the Board of Directors, any such stockholder of record may nominate a person or persons (as the case may be), for election to such position(s) as specified in the corporation's notice of meeting, if written notice setting forth the information required by Section 5(b) (i) of these Bylaws shall be received by the Secretary at the principal executive offices of the corporation not later than the close of business on the later of the ninetieth (90th) day prior to such meeting or the tenth (10th) day following the day on which public announcement is first made of the date of the special meeting and of the nominees proposed by the Board of Directors to be elected at such meeting. The stockholder shall also update and supplement such information as required under Section 5(c). In no event shall an adjournment or a postponement of a special meeting for which notice has been given, or the public announcement thereof has been made, commence a new time period for the giving of a stockholder's notice as described above.

(d) Notwithstanding the foregoing provisions of this Section 6, a stockholder must also comply with all applicable requirements of the 1934 Act and the rules and regulations thereunder with respect to matters set forth in this Section 6. Nothing in these Bylaws shall be deemed to affect any rights of stockholders to request inclusion of proposals in the corporation's proxy statement pursuant to Rule 14a-8 under the 1934 Act; provided, however, that any references in these Bylaws to the 1934 Act or the rules and regulations thereunder are not intended to and shall not limit the requirements applicable to nominations for the election to the Board of Directors to be considered pursuant to Section 6(c) of these Bylaws.

7. **NOTICE OF MEETINGS.** Except as otherwise provided by law, notice, given in writing or by electronic transmission, of each meeting of stockholders shall be given not less than ten (10) nor more than sixty (60) days before the date of the meeting to each stockholder entitled to vote at such meeting, such notice to specify the place, if any, date and hour, in the case of special meetings, the purpose or purposes of the meeting, and the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at any such meeting. If mailed, notice is given when deposited in the United States mail, postage prepaid, directed to the stockholder at such stockholder's address as it appears on the records of the corporation. Notice of the time, place, if any, and purpose of any meeting of stockholders may be waived in writing, signed by the person entitled to notice thereof, or by electronic transmission by such person, either before or after such meeting, and will be waived by any stockholder by his attendance thereat in person, by remote communication, if applicable, or by proxy, except when the stockholder attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Any stockholder so waiving notice of such meeting shall be bound by the proceedings of any such meeting in all respects as if due notice thereof had been given.

8. **QUORUM.** At all meetings of stockholders, except where otherwise provided by statute or by the corporation's Fourth Amended and Restated Certificate of Incorporation, as it may be amended from time to time (the "*Certificate of Incorporation*"), or by these Bylaws, the presence, in person, by remote communication, if applicable, or by proxy duly authorized, of the holders of a majority of the outstanding shares of stock entitled to vote shall constitute a quorum for the transaction of business. In the absence of a quorum, any meeting of stockholders may be adjourned, from time to time, either by the chairman of the meeting or by vote of the holders of a majority of the shares represented thereat, but no other business shall be transacted at such meeting. The stockholders present at a duly called or convened meeting, at which a quorum is present, may continue to transact business until adjournment, notwithstanding the withdrawal of enough stockholders to leave less than a quorum. Except as otherwise provided by statute or by applicable stock exchange rules, or by the Certificate of Incorporation or these Bylaws, in all matters other than the election of directors, the affirmative vote of the majority of shares present in person, by remote communication, if applicable, or represented by proxy at the meeting and entitled to vote generally on the subject matter shall be the act of the stockholders. Except as otherwise provided by statute, the Certificate of Incorporation or these Bylaws, directors shall be elected by a plurality of the votes of the shares present in person, by remote communication, if applicable, or represented by proxy at the meeting and entitled to vote generally on the election of directors. Where a separate vote by a class or classes or series is required, except where otherwise provided by the statute or by the Certificate of Incorporation or these Bylaws, a majority of the outstanding shares of such class or classes or series, present in person, by remote communication, if applicable, or represented by proxy duly authorized, shall constitute a quorum entitled to take action with respect to that vote on that matter. Except where otherwise provided by statute or by the Certificate of Incorporation or these Bylaws, the affirmative vote of the majority (plurality, in the case of the election of directors) of shares of such class or classes or series present in person, by remote communication, if applicable, or represented by proxy at the meeting shall be the act of such class or classes or series.

9. ADJOURNMENT AND NOTICE OF ADJOURNED MEETINGS. Any meeting of stockholders, whether annual or special, may be adjourned from time to time either by the chairman of the meeting or by the vote of a majority of the shares present in person, by remote communication, if applicable, or represented by proxy at the meeting. When a meeting is adjourned to another time or place, if any, notice need not be given of the adjourned meeting if the time and place, if any, thereof are announced at the meeting at which the adjournment is taken. At the adjourned meeting, the corporation may transact any business which might have been transacted at the original meeting. If the adjournment is for more than thirty (30) days or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

10. VOTING RIGHTS. For the purpose of determining those stockholders entitled to vote at any meeting of the stockholders, except as otherwise provided by law, only persons in whose names shares stand on the stock records of the corporation on the record date, as provided in Section 12 of these Bylaws, shall be entitled to vote at any meeting of stockholders. Every person entitled to vote shall have the right to do so either in person, by remote communication, if applicable, or by an agent or agents authorized by a proxy granted in accordance with Delaware law. An agent so appointed need not be a stockholder. No proxy shall be voted after three (3) years from its date of creation unless the proxy provides for a longer period.

11. JOINT OWNERS OF STOCK. If shares or other securities having voting power stand of record in the names of two (2) or more persons, whether fiduciaries, members of a partnership, joint tenants, tenants in common, tenants by the entirety, or otherwise, or if two (2) or more persons have the same fiduciary relationship respecting the same shares, unless the Secretary is given written notice to the contrary and is furnished with a copy of the instrument or order appointing them or creating the relationship wherein it is so provided, their acts with respect to voting shall have the following effect: (a) if only one (1) votes, his act binds all; (b) if more than one (1) votes, the act of the majority so voting binds all; (c) if more than one (1) votes, but the vote is evenly split on any particular matter, each faction may vote the securities in question proportionally, or may apply to the Delaware Court of Chancery for relief as provided in the DGCL, Section 217(b). If the instrument filed with the Secretary shows that any such tenancy is held in unequal interests, a majority or even-split for the purpose of subsection (c) shall be a majority or even-split in interest.

12. LIST OF STOCKHOLDERS. The Secretary shall prepare and make, at least ten (10) days before every meeting of stockholders, a complete list of the stockholders entitled to vote at said meeting, arranged in alphabetical order, showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, (a) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of the meeting, or (b) during ordinary business hours, at the principal place of business of the corporation. In the event that the corporation determines to make the list available on an electronic network, the corporation may take reasonable steps to ensure that such information is available only to stockholders of the corporation. The list shall be open to examination of any stockholder during the time of the meeting as provided by law.

13. ACTION WITHOUT MEETING. No action shall be taken by the stockholders except at an annual or special meeting of stockholders called in accordance with these Bylaws, and no action shall be taken by the stockholders by written consent or by electronic transmission.

14. ORGANIZATION.

(a) At every meeting of stockholders, the Chairman of the Board of Directors, or, if a Chairman has not been appointed or is absent, the President, or, if the President is absent, a chairman of the meeting chosen by a majority in interest of the stockholders entitled to vote, present in person or by proxy, shall act as chairman. The Secretary, or, in his or her absence, an Assistant Secretary directed to do so by the President, shall act as secretary of the meeting.

(b) The Board of Directors of the corporation shall be entitled to make such rules or regulations for the conduct of meetings of stockholders as it shall deem necessary, appropriate or convenient. Subject to such rules and regulations of the Board of Directors, if any, the chairman of the meeting shall have the right and authority to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such chairman, are necessary, appropriate or convenient for the proper conduct of the meeting, including, without limitation, establishing an agenda or order of business for the meeting, rules and procedures for maintaining order at the meeting and the safety of those present, limitations on participation in such meeting to stockholders of record of the corporation and their duly authorized and constituted proxies and such other persons as the chairman shall permit, restrictions on entry to the meeting after the time fixed for the commencement thereof, limitations on the time allotted to questions or comments by participants and regulation of the opening and closing of the polls for balloting on matters which are to be voted on by ballot. The date and time of the opening and closing of the polls for each matter upon which the stockholders will vote at the meeting shall be announced at the meeting. Unless and to the extent determined by the Board of Directors or the chairman of the meeting, meetings of stockholders shall not be required to be held in accordance with rules of parliamentary procedure.

ARTICLE IV **DIRECTORS**

15. **NUMBER AND TERM OF OFFICE.** The authorized number of directors of the corporation shall be fixed in accordance with the Certificate of Incorporation. Directors need not be stockholders unless so required by the Certificate of Incorporation. If for any cause, the directors shall not have been elected at an annual meeting, they may be elected as soon thereafter as convenient at a special meeting of the stockholders called for that purpose in the manner provided in these Bylaws.

16. **POWERS.** The powers of the corporation shall be exercised, its business conducted and its property controlled by the Board of Directors, except as may be otherwise provided by statute or by the Certificate of Incorporation.

17. **CLASSES OF DIRECTORS.** Subject to the rights of the holders of any series of Preferred Stock to elect additional directors under specified circumstances, the directors shall be divided into three classes designated as Class I, Class II and Class III, respectively. The Board of Directors is authorized to assign members of the Board of Directors already in office to such classes at the time the classification becomes effective. At the first annual meeting of stockholders following the initial classification of the Board of Directors, the term of office of the Class I directors shall expire and the Class I directors shall be elected for a term of that will expire at the fourth annual meeting of stockholders following the initial classification of the Board of Directors. At the second annual meeting of stockholders following such initial classification, the term of office of the Class II directors shall expire and the Class II directors shall be elected for a term of that will expire at the fifth annual meeting of stockholders following the initial classification of the Board of Directors. At the third annual meeting of stockholders following such initial classification, the term of office of the Class III directors shall expire and the Class III directors shall be elected for a term of that will expire at the sixth annual meeting of stockholders following the initial classification of the Board of Directors. At each succeeding annual meeting of stockholders, directors shall be elected for a term that will expire at the third annual meeting of stockholders following such annual meeting to succeed the directors of the class whose terms expire at such annual meeting.

Notwithstanding the foregoing provisions of this Section, each director shall serve until his or her successor is duly elected and qualified or until his or her earlier death, resignation or removal. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

18. VACANCIES. Unless otherwise provided in the Certificate of Incorporation, and subject to the rights of the holders of any series of Preferred Stock, any vacancies on the Board of Directors resulting from death, resignation, disqualification, removal or other causes and any newly created directorships resulting from any increase in the number of directors shall, unless the Board of Directors determines by resolution that any such vacancies or newly created directorships shall be filled by stockholders, be filled only by the affirmative vote of a majority of the directors then in office, even though less than a quorum of the Board of Directors, or by a sole remaining director, and not by the stockholders; provided, however, that whenever the holders of any class or classes of stock or series thereof are entitled to elect one or more directors by the provisions of the Certificate of Incorporation, vacancies and newly created directorships of such class or classes or series shall, unless the Board of Directors determines by resolution that any such vacancies or newly created directorships shall be filled by stockholders, be filled by a majority of the directors elected by such class or classes or series thereof then in office, or by a sole remaining director so elected, and not by the stockholders. Any director elected in accordance with the preceding sentence shall hold office for the remainder of the full term of the director for which the vacancy was created or occurred and until such director's successor shall have been elected and qualified. A vacancy in the Board of Directors shall be deemed to exist under this Section in the case of the death, removal or resignation of any director.

19. RESIGNATION. Any director may resign at any time by delivering his or her notice in writing or by electronic transmission to the Secretary, such resignation to specify whether it will be effective at a particular time. If no such specification is made, such resignation shall be deemed effective at the time of delivery to the Secretary. When one or more directors shall resign from the Board of Directors, effective at a future date, a majority of the directors then in office, including those who have so resigned, shall have power to fill such vacancy or vacancies, the vote thereon to take effect when such resignation or resignations shall become effective, and each Director so chosen shall hold office for the unexpired portion of the term of the Director whose place shall be vacated and until his successor shall have been duly elected and qualified.

20. REMOVAL.

(a) Subject to the rights of any series of Preferred Stock to elect additional directors under specified circumstances, neither the Board of Directors nor any individual director may be removed without cause.

(b) Subject to any limitation imposed by law, any individual director or directors may be removed only with cause by the affirmative vote of a majority of the shares present in person, by remote communication, if applicable, or represented by proxy at a meeting of stockholders and entitled to vote generally on the election of directors, voting together as a single class.

21. MEETINGS.

(a) **Regular Meetings.** Unless otherwise restricted by the Certificate of Incorporation, regular meetings of the Board of Directors may be held at any time or date and at any place within or without the State of Delaware which has been designated by the Board of Directors and publicized among all directors, either orally or in writing, by telephone, including a voice-messaging system or other system designed to record and communicate messages, facsimile, telegraph or telex, or by electronic mail or other electronic means. No further notice shall be required for regular meetings of the Board of Directors.

(b) **Special Meetings.** Unless otherwise restricted by the Certificate of Incorporation, special meetings of the Board of Directors may be held at any time and place within or without the State of Delaware whenever called by any member of the Board of Directors.

(c) **Meetings by Electronic Communications Equipment.** Any member of the Board of Directors, or of any committee thereof, may participate in a meeting by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting by such means shall constitute presence in person at such meeting.

(d) **Notice of Special Meetings.** Notice of the time and place of all special meetings of the Board of Directors shall be given orally or in writing, by telephone, including a voice messaging system or other system or technology designed to record and communicate messages, facsimile, telegraph or telex, or by electronic mail or other electronic means, during normal business hours, at least twenty-four (24) hours before the date and time of the meeting. If notice is sent by U.S. mail, it shall be sent by first class mail, charges prepaid, at least three (3) days before the date of the meeting. Notice of any meeting may be waived in writing, or by electronic transmission, at any time before or after the meeting and will be waived by any director by attendance thereat, except when the director attends the meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened.

(e) **Waiver of Notice.** The transaction of all business at any meeting of the Board of Directors, or any committee thereof, however called or noticed, or wherever held, shall be as valid as though it had been transacted at a meeting duly held after regular call and notice, if a quorum be present and if, either before or after the meeting, each of the directors not present who did not receive notice shall sign a written waiver of notice or shall waive notice by electronic transmission. All such waivers shall be filed with the corporate records or made a part of the minutes of the meeting.

22. QUORUM AND VOTING.

(a) Unless the Certificate of Incorporation requires a greater number, a quorum of the Board of Directors shall consist of a majority of the exact number of directors fixed from time to time by the Board of Directors in accordance with the Certificate of Incorporation; provided, however, at any meeting whether a quorum be present or otherwise, a majority of the directors present may adjourn from time to time until the time fixed for the next regular meeting of the Board of Directors, without notice other than by announcement at the meeting.

(b) At each meeting of the Board of Directors at which a quorum is present, all questions and business shall be determined by the affirmative vote of a majority of the directors present, unless a different vote be required by law, the Certificate of Incorporation or these Bylaws.

23. **ACTION WITHOUT MEETING.** Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, if all members of the Board of Directors or committee, as the case may be, consent thereto in writing or by electronic transmission, and such writing or writings or transmission or transmissions are filed with the minutes of proceedings of the Board of Directors or committee. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

24. **FEES AND COMPENSATION.** Directors shall be entitled to such compensation for their services as may be approved by the Board of Directors, including, if so approved, by resolution of the Board of Directors, a fixed sum and expenses of attendance, if any, for attendance at each regular or special meeting of the Board of Directors and at any meeting of a committee of the Board of Directors. Nothing herein contained shall be construed to preclude any director from serving the corporation in any other capacity as an officer, agent, employee, or otherwise and receiving compensation therefor.

25. COMMITTEES.

(a) **Executive Committee.** The Board of Directors may appoint an Executive Committee to consist of one or more members of the Board of Directors. The Executive Committee, to the extent permitted by law and provided in the resolution of the Board of Directors shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the corporation, and may authorize the seal of the corporation to be affixed to all papers which may require it; but no such committee shall have the power or authority in reference to (i) approving or adopting, or recommending to the stockholders, any action or matter (other than the election or removal of directors) expressly required by the DGCL to be submitted to stockholders for approval, or (ii) adopting, amending or repealing any Bylaw of the corporation.

(b) **Other Committees.** The Board of Directors may, from time to time, appoint such other committees as may be permitted by law. Such other committees appointed by the Board of Directors shall consist of one or more members of the Board of Directors and shall have such powers and perform such duties as may be prescribed by the resolution or resolutions creating such committees, but in no event shall any such committee have the powers denied to the Executive Committee in these Bylaws.

(c) **Term.** The Board of Directors, subject to any requirements of any outstanding series of Preferred Stock and the provisions of subsections (a) and (b) of this Section 25, may at any time increase or decrease the number of members of a committee or terminate the existence of a committee. The membership of a committee member shall terminate on the date of his death or voluntary resignation from the committee or from the Board of Directors. The Board of Directors may at any time for any reason remove any individual committee member and the Board of Directors may fill any committee vacancy created by death, resignation, removal or increase in the number of members of the committee. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee, and, in addition, in the absence or disqualification of any member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not he or they constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member.

(d) **Meetings.** Unless the Board of Directors shall otherwise provide, regular meetings of the Executive Committee or any other committee appointed pursuant to this Section 25 shall be held at such times and places as are determined by the Board of Directors, or by any such committee, and when notice thereof has been given to each member of such committee, no further notice of such regular meetings need be given thereafter. Special meetings of any such committee may be held at any place which has been determined from time to time by such committee, and may be called by any director who is a member of such committee, upon notice to the members of such committee of the time and place of such special meeting given in the manner provided for the giving of notice to members of the Board of Directors of the time and place of special meetings of the Board of Directors. Notice of any special meeting of any committee may be waived in writing or by electronic transmission at any time before or after the meeting and will be waived by any director by attendance thereat, except when the director attends such special meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Unless otherwise provided by the Board of Directors in the resolutions authorizing the creation of the committee, a majority of the authorized number of members of any such committee shall constitute a quorum for the transaction of business, and the act of a majority of those present at any meeting at which a quorum is present shall be the act of such committee.

26. **LEAD INDEPENDENT DIRECTOR.** The Chairman of the Board of Directors, or if the Chairman is not an independent director, one of the independent directors, may be designated by the Board of Directors as lead independent director to serve until replaced by the Board of Directors (the "**Lead Independent Director**"). The Lead Independent Director will: with the Chairman of the Board of Directors, establish the agenda for regular Board meetings and serve as chairman of Board of Directors meetings in the absence of the Chairman of the Board of Directors; establish the agenda for meetings of the independent directors; coordinate with the committee chairs regarding meeting agendas and informational requirements; preside over meetings of the independent directors; preside over any portions of meetings of the Board of Directors at which the evaluation or compensation of the Chief Executive Officer is presented or discussed; preside over any portions of meetings of the Board of Directors at which the performance of the Board of Directors is presented or discussed; and perform such other duties as may be established or delegated by the Chairman of the Board of Directors.

27. ORGANIZATION. At every meeting of the directors, the Chairman of the Board of Directors, or, if a Chairman has not been appointed or is absent, the Lead Independent Director, or if the Lead Independent Director is absent, the Chief Executive Officer (if a director), or, if the Chief Executive Officer is absent, the President (if a director), or if the President is absent, the most senior Vice President (if a director), or, in the absence of any such person, a chairman of the meeting chosen by a majority of the directors present, shall preside over the meeting. The Secretary, or in his absence, any Assistant Secretary or other officer or director directed to do so by the President, shall act as secretary of the meeting.

28. DUTIES OF CHAIRMAN OF THE BOARD OF DIRECTORS. The Chairman of the Board of Directors, when present, shall preside at all meetings of the stockholders and the Board of Directors. The Chairman of the Board of Directors shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers, as the Board of Directors shall designate from time to time.

ARTICLE V **OFFICERS**

29. OFFICERS DESIGNATED. The officers of the corporation shall include, if and when designated by the Board of Directors, the Chief Executive Officer, the President, one or more Vice Presidents, the Secretary, the Chief Financial Officer and the Treasurer. The Board of Directors may also appoint one or more Assistant Secretaries and Assistant Treasurers and such other officers and agents with such powers and duties as it shall deem necessary. The Board of Directors may assign such additional titles to one or more of the officers as it shall deem appropriate. Any one person may hold any number of offices of the corporation at any one time unless specifically prohibited therefrom by law. The salaries and other compensation of the officers of the corporation shall be fixed by or in the manner designated by the Board of Directors.

30. TENURE AND DUTIES OF OFFICERS.

(a) General. All officers shall hold office at the pleasure of the Board of Directors and until their successors shall have been duly elected and qualified, unless sooner removed. Any officer elected or appointed by the Board of Directors may be removed at any time by the Board of Directors. If the office of any officer becomes vacant for any reason, the vacancy may be filled by the Board of Directors.

(b) Duties of Chief Executive Officer. The Chief Executive Officer shall preside at all meetings of the stockholders and at all meetings of the Board of Directors, unless the Chairman of the Board of Directors or the Lead Independent Director has been appointed and is present. Unless an officer has been appointed Chief Executive Officer of the corporation, the President shall be the chief executive officer of the corporation and shall, subject to the control of the Board of Directors, have general supervision, direction and control of the business and officers of the corporation. To the extent that a Chief Executive Officer has been appointed and no President has been appointed, all references in these Bylaws to the President shall be deemed references to the Chief Executive Officer. The Chief Executive Officer shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers, as the Board of Directors shall designate from time to time.

(c) Duties of President. The President shall preside at all meetings of the stockholders and at all meetings of the Board of Directors, unless the Chairman of the Board of Directors, the Lead Independent Director, or the Chief Executive Officer has been appointed and is present. Unless another officer has been appointed Chief Executive Officer of the corporation, the President shall be the chief executive officer of the corporation and shall, subject to the control of the Board of Directors, have general supervision, direction and control of the business and officers of the corporation. The President shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers, as the Board of Directors shall designate from time to time.

(d) Duties of Vice Presidents. The Vice Presidents may assume and perform the duties of the President in the absence or disability of the President or whenever the office of President is vacant. The Vice Presidents shall perform other duties commonly incident to their office and shall also perform such other duties and have such other powers as the Board of Directors or the Chief Executive Officer, or, if the Chief Executive Officer has not been appointed or is absent, the President shall designate from time to time.

(e) Duties of Secretary. The Secretary shall attend all meetings of the stockholders and of the Board of Directors and shall record all acts and proceedings thereof in the minute book of the corporation. The Secretary shall give notice in conformity with these Bylaws of all meetings of the stockholders and of all meetings of the Board of Directors and any committee thereof requiring notice. The Secretary shall perform all other duties provided for in these Bylaws and other duties commonly incident to the office and shall also perform such other duties and have such other powers, as the Board of Directors shall designate from time to time. The President may direct any Assistant Secretary or other officer to assume and perform the duties of the Secretary in the absence or disability of the Secretary, and each Assistant Secretary shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the President shall designate from time to time.

(f) Duties of Chief Financial Officer. The Chief Financial Officer shall keep or cause to be kept the books of account of the corporation in a thorough and proper manner and shall render statements of the financial affairs of the corporation in such form and as often as required by the Board of Directors or the President. The Chief Financial Officer, subject to the order of the Board of Directors, shall have the custody of all funds and securities of the corporation. The Chief Financial Officer shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the President shall designate from time to time. To the extent that a Chief Financial Officer has been appointed and no Treasurer has been appointed, all references in these Bylaws to the Treasurer shall be deemed references to the Chief Financial Officer. The President may direct the Treasurer, if any, or any Assistant Treasurer, or the Controller or any Assistant Controller to assume and perform the duties of the Chief Financial Officer in the absence or disability of the Chief Financial Officer, and each Treasurer and Assistant Treasurer and each Controller and Assistant Controller shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the President shall designate from time to time.

(g) Duties of Treasurer. Unless another officer has been appointed Chief Financial Officer of the corporation, the Treasurer shall be the chief financial officer of the corporation and shall keep or cause to be kept the books of account of the corporation in a thorough and proper manner and shall render statements of the financial affairs of the corporation in such form and as often as required by the Board of Directors or the President, and, subject to the order of the Board of Directors, shall have the custody of all funds and securities of the corporation. The Treasurer shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the President shall designate from time to time.

31. DELEGATION OF AUTHORITY. The Board of Directors may from time to time delegate the powers or duties of any officer to any other officer or agent, notwithstanding any provision hereof.

32. RESIGNATIONS. Any officer may resign at any time by giving notice in writing or by electronic transmission to the Board of Directors or to the President or to the Secretary. Any such resignation shall be effective when received by the person or persons to whom such notice is given, unless a later time is specified therein, in which event the resignation shall become effective at such later time. Unless otherwise specified in such notice, the acceptance of any such resignation shall not be necessary to make it effective. Any resignation shall be without prejudice to the rights, if any, of the corporation under any contract with the resigning officer.

33. REMOVAL. Any officer may be removed from office at any time, either with or without cause, by the affirmative vote of a majority of the directors in office at the time, or by the unanimous written consent of the directors in office at the time, or by any committee or by the Chief Executive Officer or by other superior officers upon whom such power of removal may have been conferred by the Board of Directors.

ARTICLE VI
EXECUTION OF CORPORATE INSTRUMENTS AND VOTING OF SECURITIES
OWNED BY THE CORPORATION

34. EXECUTION OF CORPORATE INSTRUMENTS. The Board of Directors may, in its discretion, determine the method and designate the signatory officer or officers, or other person or persons, to execute on behalf of the corporation any corporate instrument or document, or to sign on behalf of the corporation the corporate name without limitation, or to enter into contracts on behalf of the corporation, except where otherwise provided by law or these Bylaws, and such execution or signature shall be binding upon the corporation.

All checks and drafts drawn on banks or other depositaries on funds to the credit of the corporation or in special accounts of the corporation shall be signed by such person or persons as the Board of Directors shall authorize so to do.

Unless authorized or ratified by the Board of Directors or within the agency power of an officer, no officer, agent or employee shall have any power or authority to bind the corporation by any contract or engagement or to pledge its credit or to render it liable for any purpose or for any amount.

35. VOTING OF SECURITIES OWNED BY THE CORPORATION. All stock and other securities of other corporations owned or held by the corporation for itself, or for other parties in any capacity, shall be voted, and all proxies with respect thereto shall be executed, by the person authorized so to do by resolution of the Board of Directors, or, in the absence of such authorization, by the Chairman of the Board of Directors, the Chief Executive Officer, the President, or any Vice President.

ARTICLE VII
SHARES OF STOCK

36. FORM AND EXECUTION OF CERTIFICATES. The shares of the corporation shall be represented by certificates, or shall be uncertificated if so provided by resolution or resolutions of the Board of Directors. Certificates for the shares of stock, if any, shall be in such form as is consistent with the Certificate of Incorporation and applicable law. Every holder of stock represented by certificate in the corporation shall be entitled to have a certificate signed by or in the name of the corporation by the Chairman of the Board of Directors or the President or any Vice President and by the Treasurer or Assistant Treasurer or the Secretary or Assistant Secretary, certifying the number of shares owned by him in the corporation. Any or all of the signatures on the certificate may be facsimiles. In case any officer, transfer agent, or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent, or registrar before such certificate is issued, it may be issued with the same effect as if he were such officer, transfer agent, or registrar at the date of issue.

37. LOST CERTIFICATES. A new certificate or certificates shall be issued in place of any certificate or certificates theretofore issued by the corporation alleged to have been lost, stolen, or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen, or destroyed. The corporation may require, as a condition precedent to the issuance of a new certificate or certificates, the owner of such lost, stolen, or destroyed certificate or certificates, or the owner's legal representative, to agree to indemnify the corporation in such manner as it shall require or to give the corporation a surety bond in such form and amount as it may direct as indemnity against any claim that may be made against the corporation with respect to the certificate alleged to have been lost, stolen, or destroyed.

38. TRANSFERS.

(a) Transfers of record of shares of stock of the corporation shall be made only upon its books by the holders thereof, in person or by attorney duly authorized, and, in the case of stock represented by certificate, upon the surrender of a properly endorsed certificate or certificates for a like number of shares.

(b) The corporation shall have power to enter into and perform any agreement with any number of stockholders of any one or more classes of stock of the corporation to restrict the transfer of shares of stock of the corporation of any one or more classes owned by such stockholders in any manner not prohibited by the DGCL.

39. FIXING RECORD DATES.

(a) In order that the corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall, subject to applicable law, not be more than sixty (60) nor less than ten (10) days before the date of such meeting. If no record date is fixed by the Board of Directors, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

(b) In order that the corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the Board of Directors may fix, in advance, a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than sixty (60) days prior to such action. If no record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

40. REGISTERED STOCKHOLDERS. The corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

ARTICLE VIII
OTHER SECURITIES OF THE CORPORATION

41. EXECUTION OF OTHER SECURITIES. All bonds, debentures and other corporate securities of the corporation, other than stock certificates (covered in Section 36), may be signed by the Chairman of the Board of Directors, the President or any Vice President, or such other person as may be authorized by the Board of Directors, and the corporate seal impressed thereon or a facsimile of such seal imprinted thereon and attested by the signature of the Secretary or an Assistant Secretary, or the Chief Financial Officer or Treasurer or an Assistant Treasurer; provided, however, that where any such bond, debenture or other corporate security shall be authenticated by the manual signature, or where permissible facsimile signature, of a trustee under an indenture pursuant to which such bond, debenture or other corporate security shall be issued, the signatures of the persons signing and attesting the corporate seal on such bond, debenture or other corporate security may be the imprinted facsimile of the signatures of such persons. Interest coupons appertaining to any such bond, debenture or other corporate security, authenticated by a trustee as aforesaid, shall be signed by the Treasurer or an Assistant Treasurer of the corporation or such other person as may be authorized by the Board of Directors, or bear imprinted thereon the facsimile signature of such person. In case any officer who shall have signed or attested any bond, debenture or other corporate security, or whose facsimile signature shall appear thereon or on any such interest coupon, shall have ceased to be such officer before the bond, debenture or other corporate security so signed or attested shall have been delivered, such bond, debenture or other corporate security nevertheless may be adopted by the corporation and issued and delivered as though the person who signed the same or whose facsimile signature shall have been used thereon had not ceased to be such officer of the corporation.

ARTICLE IX
DIVIDENDS

42. **DECLARATION OF DIVIDENDS.** Dividends upon the capital stock of the corporation, subject to the provisions of the Certificate of Incorporation and applicable law, if any, may be declared by the Board of Directors pursuant to law at any regular or special meeting. Dividends may be paid in cash, in property, or in shares of the capital stock, subject to the provisions of the Certificate of Incorporation and applicable law.

43. **DIVIDEND RESERVE.** Before payment of any dividend, there may be set aside out of any funds of the corporation available for dividends such sum or sums as the Board of Directors from time to time, in their absolute discretion, think proper as a reserve or reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property of the corporation, or for such other purpose as the Board of Directors shall think conducive to the interests of the corporation, and the Board of Directors may modify or abolish any such reserve in the manner in which it was created.

ARTICLE X
FISCAL YEAR

44. **FISCAL YEAR.** The fiscal year of the corporation shall be fixed by resolution of the Board of Directors.

ARTICLE XI
INDEMNIFICATION

45. **INDEMNIFICATION OF DIRECTORS, OFFICERS, EMPLOYEES AND OTHER AGENTS.**

(a) **Directors and Officers.** The corporation shall indemnify its directors and officers to the extent not prohibited by the DGCL or any other applicable law; provided, however, that the corporation may modify the extent of such indemnification by individual contracts with its directors and officers; and, provided, further, that the corporation shall not be required to indemnify any director or officer in connection with any proceeding (or part thereof) initiated by such person unless (i) such indemnification is expressly required to be made by law, (ii) the proceeding was authorized by the Board of Directors of the corporation, (iii) such indemnification is provided by the corporation, in its sole discretion, pursuant to the powers vested in the corporation under the DGCL or any other applicable law or (iv) such indemnification is required to be made under paragraph (d) of this Section.

(b) **Employees and Other Agents.** The corporation shall have the power to indemnify its employees and other agents as set forth in the DGCL or any other applicable law. The Board of Directors shall have the power to delegate the determination of whether indemnification shall be given to any such person to such officers or other persons as the Board of Directors shall determine.

(c) **Expenses.** The corporation shall advance to any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that he or she is or was a director or officer, of the corporation, or is or was serving at the request of the corporation as a director or officer of another corporation, partnership, joint venture, trust or other enterprise, prior to the final disposition of the proceeding, promptly following request therefor, all expenses incurred by any director or officer in connection with such proceeding; provided, however, that if the DGCL requires, an advancement of expenses incurred by a director or officer in his or her capacity as a director or officer (and not in any other capacity in which service was or is rendered by such indemnitee, including, without limitation, service to an employee benefit plan) shall be made only upon delivery to the corporation of an undertaking (hereinafter an "*undertaking*"), by or on behalf of such indemnitee, to repay all amounts so advanced if it shall ultimately be determined by final judicial decision from which there is no further right to appeal (hereinafter a "*final adjudication*") that such indemnitee is not entitled to be indemnified for such expenses under this Section or otherwise.

Notwithstanding the foregoing, unless otherwise determined pursuant to paragraph (e) of this Section, no advance shall be made by the corporation to an officer of the corporation (except by reason of the fact that such officer is or was a director of the corporation in which event this paragraph shall not apply) in any action, suit or proceeding, whether civil, criminal, administrative or investigative, if a determination is reasonably and promptly made (i) by a majority vote of directors who were not parties to the proceeding, even if not a quorum, or (ii) by a committee of such directors designated by a majority vote of such directors, even though less than a quorum, or (iii) if there are no such directors, or such directors so direct, by independent legal counsel in a written opinion, that the facts known to the decision-making party at the time such determination is made demonstrate clearly and convincingly that such person acted in bad faith or in a manner that such person did not believe to be in or not opposed to the best interests of the corporation.

(d) Enforcement. Without the necessity of entering into an express contract, all rights to indemnification and advances to directors and officers under this Bylaw shall be deemed to be contractual rights and be effective to the same extent and as if provided for in a contract between the corporation and the director or officer. Any right to indemnification or advances granted by this Section to a director or officer shall be enforceable by or on behalf of the person holding such right in any court of competent jurisdiction if (i) the claim for indemnification or advances is denied, in whole or in part, or (ii) no disposition of such claim is made within ninety (90) days of request therefor. To the extent permitted by law, the claimant in such enforcement action, if successful in whole or in part, shall be entitled to be paid also the expense of prosecuting the claim. In connection with any claim for indemnification, the corporation shall be entitled to raise as a defense to any such action that the claimant has not met the standards of conduct that make it permissible under the DGCL or any other applicable law for the corporation to indemnify the claimant for the amount claimed. In connection with any claim by an officer of the corporation (except in any action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that such officer is or was a director of the corporation) for advances, the corporation shall be entitled to raise a defense as to any such action clear and convincing evidence that such person acted in bad faith or in a manner that such person did not believe to be in or not opposed to the best interests of the corporation, or with respect to any criminal action or proceeding that such person acted without reasonable cause to believe that his conduct was lawful. Neither the failure of the corporation (including its Board of Directors, independent legal counsel or its stockholders) to have made a determination prior to the commencement of such action that indemnification of the claimant is proper in the circumstances because the officer or director has met the applicable standard of conduct set forth in the DGCL or any other applicable law, nor an actual determination by the corporation (including its Board of Directors, independent legal counsel or its stockholders) that the claimant has not met such applicable standard of conduct, shall be a defense to the action or create a presumption that claimant has not met the applicable standard of conduct. In any suit brought by a director or officer to enforce a right to indemnification or to an advancement of expenses hereunder, the burden of proving that the director or officer is not entitled to be indemnified, or to such advancement of expenses, under this Section or otherwise shall be on the corporation.

(e) Non-Exclusivity of Rights. The rights conferred on any person by this Bylaw shall not be exclusive of any other right which such person may have or hereafter acquire under any applicable statute, provision of the Certificate of Incorporation, Bylaws, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in such person's official capacity and as to action in another capacity while holding office. The corporation is specifically authorized to enter into individual contracts with any or all of its directors, officers, employees or agents respecting indemnification and advances, to the fullest extent not prohibited by the DGCL, or by any other applicable law.

(f) **Survival of Rights.** The rights conferred on any person by this Bylaw shall continue as to a person who has ceased to be a director, officer, employee or other agent and shall inure to the benefit of the heirs, executors and administrators of such a person.

(g) **Insurance.** To the fullest extent permitted by the DGCL or any other applicable law, the corporation, upon approval by the Board of Directors, may purchase insurance on behalf of any person required or permitted to be indemnified pursuant to this Section.

(h) **Amendments.** Any repeal or modification of this Section shall only be prospective and shall not affect the rights under this Bylaw in effect at the time of the alleged occurrence of any action or omission to act that is the cause of any proceeding against any agent of the corporation.

(i) **Saving Clause.** If this Bylaw or any portion hereof shall be invalidated on any ground by any court of competent jurisdiction, then the corporation shall nevertheless indemnify each director and officer to the full extent not prohibited by any applicable portion of this Section that shall not have been invalidated, or by any other applicable law. If this Section shall be invalid due to the application of the indemnification provisions of another jurisdiction, then the corporation shall indemnify each director and officer to the full extent under any other applicable law.

(j) **Certain Definitions.** For the purposes of this Bylaw, the following definitions shall apply:

(i) The term ***“proceeding”*** shall be broadly construed and shall include, without limitation, the investigation, preparation, prosecution, defense, settlement, arbitration and appeal of, and the giving of testimony in, any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative.

(ii) The term ***“expenses”*** shall be broadly construed and shall include, without limitation, court costs, attorneys’ fees, witness fees, fines, amounts paid in settlement or judgment and any other costs and expenses of any nature or kind incurred in connection with any proceeding.

(iii) The term the ***“corporation”*** shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors, officers, and employees or agents, so that any person who is or was a director, officer, employee or agent of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under the provisions of this Section with respect to the resulting or surviving corporation as he would have with respect to such constituent corporation if its separate existence had continued.

(iv) References to a ***“director”***, ***“officer”***, ***“employee”***, or ***“agent”*** of the corporation shall include, without limitation, situations where such person is serving at the request of the corporation as, respectively, a director, officer, employee, trustee or agent of another corporation, partnership, joint venture, trust or other enterprise.

(v) References to ***“other enterprises”*** shall include employee benefit plans; references to ***“fines”*** shall include any excise taxes assessed on a person with respect to an employee benefit plan; and references to ***“serving at the request of the corporation”*** shall include any service as a director, officer, employee or agent of the corporation which imposes duties on, or involves services by, such director, officer, employee, or agent with respect to an employee benefit plan, its participants, or beneficiaries; and a person who acted in good faith and in a manner such person reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner ***“not opposed to the best interests of the corporation”*** as referred to in this Section.

ARTICLE XII
NOTICES

46. NOTICES.

(a) **Notice to Stockholders.** Written notice to stockholders of stockholder meetings shall be given as provided in Section 7 herein. Without limiting the manner by which notice may otherwise be given effectively to stockholders under any agreement or contract with such stockholder, and except as otherwise required by law, written notice to stockholders for purposes other than stockholder meetings may be sent by U.S. mail or nationally recognized overnight courier, or by facsimile, telegraph or telex or by electronic mail or other electronic means.

(b) **Notice to Directors.** Any notice required to be given to any director may be given by the method stated in subsection (a), as otherwise provided in these Bylaws, or by overnight delivery service, facsimile, telex or telegram, except that such notice other than one which is delivered personally shall be sent to such address as such director shall have filed in writing with the Secretary, or, in the absence of such filing, to the last known post office address of such director.

(c) **Affidavit of Mailing.** An affidavit of mailing, executed by a duly authorized and competent employee of the corporation or its transfer agent appointed with respect to the class of stock affected, or other agent, specifying the name and address or the names and addresses of the stockholder or stockholders, or director or directors, to whom any such notice or notices was or were given, and the time and method of giving the same, shall in the absence of fraud, be prima facie evidence of the facts therein contained.

(d) **Methods of Notice.** It shall not be necessary that the same method of giving notice be employed in respect of all recipients of notice, but one permissible method may be employed in respect of any one or more, and any other permissible method or methods may be employed in respect of any other or others.

(e) **Notice to Person With Whom Communication Is Unlawful.** Whenever notice is required to be given, under any provision of law or of the Certificate of Incorporation or Bylaws of the corporation, to any person with whom communication is unlawful, the giving of such notice to such person shall not be required and there shall be no duty to apply to any governmental authority or agency for a license or permit to give such notice to such person. Any action or meeting which shall be taken or held without notice to any such person with whom communication is unlawful shall have the same force and effect as if such notice had been duly given. In the event that the action taken by the corporation is such as to require the filing of a certificate under any provision of the DGCL, the certificate shall state, if such is the fact and if notice is required, that notice was given to all persons entitled to receive notice except such persons with whom communication is unlawful.

(f) **Notice to Stockholders Sharing an Address.** Except as otherwise prohibited under the DGCL, any notice given under the provisions of the DGCL, the Certificate of Incorporation or the Bylaws shall be effective if given by a single written notice to stockholders who share an address if consented to by the stockholders at that address to whom such notice is given. Such consent shall have been deemed to have been given if such stockholder fails to object in writing to the corporation within sixty (60) days of having been given notice by the corporation of its intention to send the single notice. Any consent shall be revocable by the stockholder by written notice to the corporation.

ARTICLE XIII
AMENDMENTS

47. **AMENDMENTS.** Subject to the limitations set forth in Section 45(h) of these Bylaws or the provisions of the Certificate of Incorporation, the Board of Directors is expressly empowered to adopt, amend or repeal the Bylaws of the corporation. Any adoption, amendment or repeal of the Bylaws of the corporation by the Board of Directors shall require the approval of a majority of the authorized number of directors. The stockholders also shall have power to adopt, amend or repeal the Bylaws of the corporation; provided, however, that, in addition to any vote of the holders of any class or series of stock of the corporation required by law or by the Certificate of Incorporation, such action by stockholders shall require the affirmative vote of the holders of at least sixty-six and two-thirds percent (66-2/3%) of the voting power of all of the then-outstanding shares of the capital stock of the corporation entitled to vote generally in the election of directors, voting together as a single class.

ARTICLE XIV
LOANS TO OFFICERS OR EMPLOYEES

48. **LOANS TO OFFICERS OR EMPLOYEES.** Except as otherwise prohibited by applicable law, the corporation may lend money to, or guarantee any obligation of, or otherwise assist any officer or other employee of the corporation or of its subsidiaries, including any officer or employee who is a director of the corporation or its subsidiaries, whenever, in the judgment of the Board of Directors, such loan, guarantee or assistance may reasonably be expected to benefit the corporation. The loan, guarantee or other assistance may be with or without interest and may be unsecured, or secured in such manner as the Board of Directors shall approve, including, without limitation, a pledge of shares of stock of the corporation. Nothing in these Bylaws shall be deemed to deny, limit or restrict the powers of guaranty or warranty of the corporation at common law or under any statute.

ARTICLE XV
AUSTRALIAN SECURITIES EXCHANGE LISTING RULES

49. **AUSTRALIAN SECURITIES EXCHANGE LISTING RULES.** While the corporation is on the official list of the Australian Securities Exchange, the following rules shall apply:

- (a) notwithstanding anything contained in these Bylaws, if the official listing rules of the Australian Securities Exchange (the "***Listing Rules***") prohibit an act being done, the act shall not be done;
- (b) nothing contained in these Bylaws prevents an act being done that the Listing Rules require to be done;
- (c) if the Listing Rules require an act to be done or not to be done, authority is given for that act to be done or not to be done (as the case may be);
- (d) if the Listing Rules require these Bylaws to contain a provision and these Bylaws do not contain such a provision, these Bylaws shall be treated as containing that provision;
- (e) if the Listing Rules require these Bylaws not to contain a provision and these Bylaws contain such a provision, these Bylaws shall be treated as not containing that provision; and
- (f) if any provision of these Bylaws is or becomes inconsistent with the Listing Rules, these Bylaws shall be treated as not containing that provision to the extent of such inconsistency.

**AMENDMENT TO THE
THIRD AMENDED AND RESTATED BYLAWS
of
NUWELLIS, INC.**

The Third Amended and Restated Bylaws (the “*Bylaws*”), of Nuwellis, Inc., a Delaware corporation, are hereby amended as follows, effective as of October 5, 2022.

1. Section 8 of ARTICLE III of the Bylaws is hereby amended and restated in its entirety to read as follows:

“**Quorum.** At all meetings of stockholders, except where otherwise provided by statute or by the corporation’s Fourth Amended and Restated Certificate of Incorporation, as it may be amended from time to time (the “*Certificate of Incorporation*”), or by these Bylaws, the presence, in person, by remote communication, if applicable, or by proxy duly authorized, of the holders of one-third of the voting power of the outstanding shares of stock entitled to vote shall constitute a quorum for the transaction of business. In the absence of a quorum, any meeting of stockholders may be adjourned, from time to time, either by the chairman of the meeting or by vote of the holders of a majority of the voting power of the shares represented thereat, but no other business shall be transacted at such meeting. The stockholders present at a duly called or convened meeting, at which a quorum is present, may continue to transact business until adjournment, notwithstanding the withdrawal of enough stockholders to leave less than a quorum. Except as otherwise provided by statute or by applicable stock exchange rules, or by the Certificate of Incorporation or these Bylaws, in all matters other than the election of directors, the affirmative vote of the majority of voting power of the shares present in person, by remote communication, if applicable, or represented by proxy at the meeting and entitled to vote generally on the subject matter shall be the act of the stockholders. Except as otherwise provided by statute, or by applicable stock exchange rules, the Certificate of Incorporation or these Bylaws, directors shall be elected by a plurality of the votes of the shares present in person, by remote communication, if applicable, or represented by proxy at the meeting and entitled to vote generally on the election of directors. Where a separate vote by a class or classes or series is required, except where otherwise provided by the statute, or by applicable stock exchange rules, or by the Certificate of Incorporation or these Bylaws, one-third of the voting power of the outstanding shares of such class or classes or series, present in person, by remote communication, if applicable, or represented by proxy duly authorized, shall constitute a quorum entitled to take action with respect to that vote on that matter. Except where otherwise provided by statute, or by applicable stock exchange rules, or by the Certificate of Incorporation or these Bylaws, the affirmative vote of the majority (plurality, in the case of the election of directors) of shares of such class or classes or series present in person, by remote communication, if applicable, or represented by proxy at the meeting shall be the act of such class or classes or series.”

2. Except as specifically amended herein, the Bylaws shall remain unchanged and in full force and effect.

[Remainder of page intentionally left blank]

NUWELLIS, INC.
CERTIFICATE OF ADOPTION OF
AMENDMENT TO THIRD AMENDED AND RESTATED BYLAWS

The undersigned hereby certifies that he is the duly elected, qualified, and acting Secretary of Nuwellis, Inc., a Delaware corporation, and that the foregoing Amendment to the Third Amended and Restated Bylaws constitutes the entire amendment to the Third Amended and Restated Bylaws, as duly adopted by the Board of Directors on October 5, 2022.

/s/ Neil P. Ayotte

Neil P. Ayotte
Secretary

CHIEF EXECUTIVE OFFICER'S 302 CERTIFICATION

I, Nestor Jaramillo, Jr., certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Nuwellis, Inc. for the quarterly period ended September 30, 2024;
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(s) 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(s) 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: November 12, 2024

/s/ Nestor Jaramillo, Jr.
Nestor Jaramillo, Jr.
President and Chief Executive Officer

CHIEF FINANCIAL OFFICER'S 302 CERTIFICATION

I, Robert Scott, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Nuwellis, Inc. for the quarterly period ended September 30, 2024.
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(s) 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(s) 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: November 12, 2024

/s/ Robert Scott
Robert Scott
Chief Financial Officer

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

In connection with the Quarterly Report of Nuwellis, Inc. (the "*Company*") on Form 10-Q for the quarterly period ended September 30, 2024, as filed with the Securities and Exchange Commission on the date hereof (the "*Report*"), I, Nestor Jaramillo, Jr., President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

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

Date: November 12, 2024

/s/ Nestor Jaramillo, Jr.
Nestor Jaramillo, Jr.
President and Chief Executive Officer

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

In connection with the Quarterly Report of Nuwellis, Inc. (the "**Company**") on Form 10-Q for the quarterly period ended September 30, 2024, as filed with the Securities and Exchange Commission on the date hereof (the "**Report**"), I, Robert Scott, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

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

Date: November 12, 2024

/s/ Robert Scott
Robert Scott
Chief Financial Officer
