

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

**FORM S-1
REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933**

NUWELLIS, INC.

(Exact name of registrant as specified in its charter)

Delaware	3845	68-0533453
(State or Other Jurisdiction of Incorporation or Organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

**12988 Valley View Road
Eden Prairie, Minnesota 55344
(952) 345-4200**
(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

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Approximate date of commencement of proposed sale to the public: As soon as practicable after this registration statement is declared effective.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box:

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

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 Accelerated filer Non-accelerated filer Smaller reporting company
Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

The information contained in this preliminary prospectus is not complete and may be changed. We may not sell these securities until the registration statement relating to these securities filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and they are not soliciting an offer to buy these securities in any jurisdiction where any such offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED SEPTEMBER 20, 2023
PRELIMINARY PROSPECTUS



NUWELLIS, INC.

Up to [•] Units

Each consisting of [•] Shares of Series J Convertible Redeemable Preferred Stock with a Liquidation Preference of \$25.00 and

[•] Warrants to Purchase [•] Shares of Series J Convertible Preferred Stock

[•] Shares of Series J Convertible Preferred Stock Underlying the Warrants

[•] Shares of Series J Convertible Preferred Stock Issuable as PIK Dividends

[•] Shares of Common Stock Underlying the Series J Convertible Preferred Stock

We are offering up to [•] units (“Unit(s)”) on a best efforts basis, with each Unit consisting of one share of our 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 warrant (each, a “Warrant”) to purchase one-half of one (0.50) share of our Series J Convertible Preferred Stock in this offering pursuant to this prospectus. Accordingly, the [•] Units consist of [•] shares of Series J Convertible Preferred Stock and [•] Warrants with an exercise price of \$[•] to purchase [•] shares of Series J Convertible Preferred Stock. The assumed public offering price for each Unit is \$[•]. The Units have no stand-alone rights and will not be certificated or issued as stand-alone securities. The Series J Convertible Preferred Stock and Warrants are immediately separable and will be issued separately in this offering. The Warrants offered hereby will be immediately exercisable on the date of issuance and will expire three (3) years from the closing date of this offering (the “Closing Date”).

The assumed public offering price of \$[•] per Unit reflects the issuance of the Series J Convertible Preferred Stock with an original issue discount (“OID”) of [•]%. The Series J Convertible Preferred Stock will not have voting rights, except as required by Delaware law and other limited circumstances.

Dividends on the Series J Convertible Preferred Stock shall be paid in-kind (“PIK dividends”) in additional shares of Series J Convertible Preferred Stock based on the stated value of \$25.00 per share at an assumed dividend rate of [•]% per annum (the “Dividend Rate”). 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 [•], [•], [•] and [•] of each year (the “Dividend Record Dates”) at the quarterly dividend rate of [•]% (the “Quarterly Dividend Rate”). PIK dividends on each share of Series J Convertible Preferred Stock shall be paid three business days after the applicable Dividend Record Date in additional fully paid and nonassessable, registered shares of Series J Convertible Preferred Stock in a number equal to the quotient obtained by dividing (A) the product obtained by multiplying (i) the Quarterly Dividend Rate and (ii) the stated value of \$25.00 per share, by (B) the public offering price per Unit (equal to \$[•], based on the assumed public offering price per Unit).

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 our common stock at a conversion price equal to the closing price of our common stock on the Nasdaq Capital Market on the date on which the registration statement of which this prospectus forms a part is declared effective by the Securities and Exchange Commission. The assumed fixed conversion price of \$[•], which assumed conversion price is based on the closing price of our common stock on September [•], 2023, and is subject to adjustment. The Series J Convertible Preferred Stock is redeemable under the circumstances described under “Description of Securities Being Offered—Series J Convertible Preferred Stock Being Offered Pursuant to this Prospectus—Mandatory Redemption”.

This offering also includes the Series J Convertible Preferred Stock issuable from time to time upon exercise of the Warrants and shares of common stock issuable from time to time upon conversion of the Series J Convertible Preferred Stock.

We refer to the shares of our Series J Convertible Preferred Stock, the shares of our common stock issuable upon conversion of the Series J Convertible Preferred Stock, the Warrants and the shares of our Series J Convertible Preferred Stock issued or issuable upon exercise of the Warrants, collectively, as the securities.

Because this is a best efforts offering, the placement agents do not have an obligation to purchase any securities, and, as a result, there is a possibility that we may not be able to sell the securities. We expect that the offering will end two trading days after we first enter into a securities purchase agreement relating to the offering and the offering will settle delivery versus payment (“DVP”) receipt versus payment (“RVP”). Accordingly, we and the placement agents have not made any arrangements to place investor funds in an escrow account or trust account since the placement agents will not receive investor funds in connection with the sale of the securities offered hereunder.

Our common stock trades on the Nasdaq Capital Market under the ticker symbol “NUWE”. On September [•], 2023, the last reported sale price for our common stock on the Nasdaq Capital Market was \$[•] per share. There is no established trading market for, and we do not expect a market to develop for, the Series J Convertible Preferred Stock or the Warrants. 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.

We have engaged Lake Street Capital Markets, LLC and Maxim Group LLC as placement agents (the “placement agents”) to use their reasonable best efforts to arrange for the sale of the securities offered by this prospectus. The placement agents are not purchasing or selling any of the securities we are offering and the placement agents are not required to arrange the purchase or sale of any specific number or dollar amount of securities. We have agreed to pay to the placement agents the placement agent fees set forth in the table below, which assumes that we sell all of the securities offered by this prospectus. There is no arrangement for funds to be received in escrow, trust or similar arrangement. See “Plan of Distribution” in this prospectus for more information.

Investing in our securities involves a high degree of risk. Before making any investment in our securities, you should read and carefully consider the risks described in this prospectus under the section of this prospectus entitled “Risk Factors” on page 13 of this prospectus, as well as the other information included or incorporated by reference in this prospectus, before buying any of our securities.

	Per Unit	Total
Public offering price		
Placement agent fees(1)		
Proceeds, before expenses, to us(2)		

(1) Represents a cash fee equal to 8% of the aggregate purchase price paid by investors in this offering. We have also agreed to reimburse the placement agents for certain of their offering-related expenses. See “Plan of Distribution” beginning on page 56 of this prospectus for a description of the compensation to be received by the Placement Agent.

(2) The amount of offering proceeds to us presented in this table does not give effect to any exercise of the Warrants.

Neither the SEC nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

Delivery of the securities is expected to be made on or about [•], 2023.

LAKE STREET

MAXIM GROUP LLC

The date of this prospectus is [•], 2023

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-1 that we filed with the Securities and Exchange Commission (“SEC”). It omits some of the information contained in the registration statement and reference is made to the registration statement for further information with regard to us and the securities being offered hereby. You should review the information and exhibits in the registration statement for further information about us and the securities being offered hereby. Statements in this prospectus concerning any document we filed as an exhibit to the registration statement or that we otherwise filed with the SEC are not intended to be comprehensive and are qualified by reference to the filings. You should review the complete document to evaluate these statements.

You should not assume that the information contained in this prospectus is accurate on any date subsequent to the date set forth on the front of the document or that any information we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus is delivered or securities are sold on a later date. Our business, financial condition, results of operations and prospects may have changed since those dates.

You should read this prospectus, any documents that we incorporate by reference in this prospectus and the additional information described below under “Where You Can Find Additional Information” and “Information Incorporated By Reference” before making an investment decision. You should rely only on the information contained or incorporated by reference in this prospectus and any free-writing prospectus that we authorize to be distributed to you. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

For investors outside of the United States: We have not, and the placement agents have not, done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to the offering of the securities and distribution of this prospectus outside the United States.

We obtained industry and market data used throughout and incorporated by reference into this prospectus through our research, surveys and studies conducted by third parties and industry and general publications. We have not independently verified market and industry data from third-party sources.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus and does not contain all of the information that you should consider in making your investment decision. Before deciding to invest in our securities, you should read this entire prospectus carefully, including our financial statements and related notes incorporated herein by reference, the information in the section “Risk Factors” and our filings incorporated by reference herein to which we have referred you in the sections “Where You Can Find Additional Information” and “Information Incorporated by Reference.” Unless the context otherwise requires, references in this prospectus to the “Company,” “NUWE,” the “registrant,” “we,” “us” and “our” refer to Nuwellis, Inc.

Company Overview

We are a medical technology company dedicated to transforming the lives of patients suffering from fluid overload through science, collaboration, and innovative technology. The company is focused on developing, manufacturing, and commercializing medical devices used in ultrafiltration therapy, including the Aquadex FlexFlow® and the Aquadex SmartFlow® systems (collectively the “Aquadex System”). 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.

Fluid Overload

Fluid overload, also known as hypervolemia, is a condition in which there is too much fluid in the blood, vital organs, and interstitial space, and generally refers to the expansion of the extracellular fluid volume. Although the body does need some amount of fluid to remain healthy, too much can cause an imbalance and damage to an individual’s health.

The signs and symptoms of fluid overload are not always the same in each patient and may vary. However, possible signs and symptoms of fluid overload include pulmonary edema/pleural effusion, peripheral edema, anasarca (swelling of the skin) ascites, jugular vein distention and dyspnea. Medical conditions or diseases where excess fluid accumulates in the body are heart failure, kidney failure, nephrotic syndrome, cirrhosis, or burn injuries/trauma. Individuals may also suffer from temporary fluid overload following certain surgical procedures, such as cardiac surgery. The diagnosis of fluid overload can be made through a variety of tests/exams such as a physical exam (weight and edema), blood chemistry, electrocardiogram (ECG or EKG), glomerular filtration rate (GFR), liver enzymes, and urinalysis, or serum/urine sodium test. Fluid overload has a significant association with the combined events of death, infection, bleeding, arrhythmia, and pulmonary edema¹ and is a leading cause of hospital readmissions with patients suffering from heart failure and patients following cardiac surgery.

The condition of fluid overload is often observed in patients with heart failure and secondary oliguric states.² Most of the symptoms of congestive heart failure result from extracellular fluid volume. For this reason, diuretics have been the cornerstone of heart failure treatment for more than 50 years. Over the past 20 years, approaches to treatment have changed dramatically.³ These dramatic improvements include new medications and new technologies, such as ultrafiltration, to help treat fluid overload. Each year there are over 1 million heart failure hospitalizations in the United States, and 90% of those hospitalizations are due to symptoms of fluid overload.⁴ These patients are hospitalized on average for 8.3⁵ days at a cost of approximately \$24,000⁶, to which reimbursement will only cover about 34%⁶ of that cost. On top of that, there is a 24% readmission rate in which the hospitals absorb another cost but do not get reimbursed.⁷

¹ Stein, A, et. al. Critical Care, 2012;16:R99.

² Ronco C, Costanzo MR, Bellomo R, et al. (2010) Fluid Overload Diagnosis and Management. Basel, Switzerland: Karger.

³ Ellison DH. Diuretic therapy and resistance in congestive heart failure. Cardiology.2001;96:132-143.

⁴ Costanzo MR, et al. J Am Coll Cardiol. 2017 May 16;69(19):2428-2445.

⁵ From Premier Applied Sciences database.

⁶ Reimbursement estimates from MCRA.

⁷ Costanzo MR, et al. J Am Coll Cardiol. 2017 May 16;69(19):2428-2445.

Treatments for Fluid Overload

Diuretics

Treatment for fluid overload has traditionally been achieved through use of oral or loop diuretics which may be accompanied by use of other categories of medications, such as ACE inhibitors, beta-blockers, and inotropic drugs. Although diuretics are the mainstay of treatment for congestion or fluid overload, no randomized trials have shown the effects of diuretics on mortality in chronic heart failure patients. Furthermore, appropriate titration of diuretics, specifically in the heart failure population, is unclear. Increasing concern exists that diuretics, particularly at high doses, may be deleterious in the inpatient setting. In addition, patients with heart failure and cardiorenal syndrome have diminished response to loop diuretics, making these agents less effective at relieving congestion.⁸ Also, long term use of diuretics has been associated with kidney damage.⁹ Approximately 40% of heart failure patients have poor diuretic response.¹⁰ This poor response is possibly due to noncompliance or high intake of salt, poor drug absorption, insufficient kidney response to drug, and reduced diuretic secretion.¹¹ Despite treatment with loop diuretics, patients are frequently hospitalized and treated for recurrent symptoms and signs of fluid overload. Among more than 50,000 patients enrolled in the Acute Decompensated Heart Failure National Registry (“ADHERE”) study, only 33% lost ≥ 2.27 kg. (5 lbs.), and 16% gained weight during hospitalization.¹²

Nearly one-half of hospitalized patients with heart failure are discharged with residual fluid excess after receiving conventional diuretic therapies.¹³ Additionally, one study found that 24% of such patients were readmitted to the hospital within 30 days of their discharge, and 50% were readmitted within 90 days.⁸ Regardless of diuretic strategy, 42% of acutely decompensated heart failure subjects in the DOSE (Diuretic Optimization Strategies Evaluation) trial reached the composite endpoint of death, rehospitalization, or emergency department visit at 60 days.¹⁴ There is an association of chronic loop diuretic therapy and greater resource utilization at hospitals.¹⁵ Therefore, an alternative therapy to help stabilize or improve patient care is needed.

Ultrafiltration

Ultrafiltration, or aquapheresis, is an alternative therapy to diuretics for fluid removal in patients with volume overload. Ultrafiltration has been a well-documented technique in the treatment of fluid overload in heart failure patients for over 20 years.¹⁶ Ultrafiltration is a safe and effective alternative therapy to remove extra fluid and salt by gently filtering blood through an ultrafiltration system. With ultrafiltration, medical practitioners can specify and control the amount of fluid to be extracted at a safe, predictable, and effective rate. The use of ultrafiltration therapy in subgroups of patients, such as heart failure and post-cardiac surgery, has demonstrated clinical benefits in treating fluid overload signs and symptoms. In addition to the clinical benefits of ultrafiltration, the therapy provides economic advantages. One hospital cost analysis demonstrated a total cost savings of \$3,975, or 14.4%, per patient when using ultrafiltration as compared to diuretic therapy over 90 days.¹⁷

The Aquadex System

The Aquadex System is designed and clinically proven to simply, safely, and precisely remove excess fluid (primarily excess salt and water) from patients suffering from fluid overload who have failed diuretic therapy.

⁸ Kamath SA. The role of ultrafiltration in patients with decompensated heart failure. *Int J of Nephrol.* 2011.

⁹ Felker MG. Diuretics and ultrafiltration in acute decompensated heart failure *J Am Coll Cardiol* 2012 Jun 12;59(24):2145-53.

¹⁰ Testani JM, Hanberg JS, Cheng S, et al. Rapid and highly accurate prediction of poor loop diuretic natriuretic response in patients with heart failure. *Circ Heart Fail.* 2016 Jan;9(1):e002370.

¹¹ Hoorn EJ and Ellison DH. Diuretic Resistance. *Am J Kidney Dis.* 2017;69(1):136-142.

¹² Costanzo MR, Ronco C, Abraham WT, et al. Extracorporeal ultrafiltration for fluid overload in heart failure. *J Am Coll Cardiol.* 2017;69(19):2428-2445.

¹³ Gheorghide M, Filippatos G. Reassessing treatment of acute heart failure syndromes: the ADHERE registry. *Eur Heart J Suppl.* 2005; 7:B13-19.

¹⁴ Felker GM, Lee KL, Bull DA, et al. Diuretic strategies in patients with acute decompensated heart failure. *N Engl J Med.* 2011; 364:797-805.

¹⁵ Costanzo MR, Guglin ME, Saltzberg MT, et al. Ultrafiltration versus intravenous diuretics for patients hospitalized for acute decompensated heart failure. *J Am Coll Cardiol.* 2007; 49(6):675-683.

¹⁶ Agostoni PG, Marenzi GC, Pepi M, et al. Isolated ultrafiltration in moderate congestive heart failure. *J Am Coll Cardiol.* 1993; 21(2):424-431.

¹⁷ Costanza MR, et al. Ultrafiltration vs. Diuretics for the Treatment of Fluid Overload in Patients with Heart Failure: A Hospital Cost Analysis. *Value Health.* 2018; 21 (Suppl 1):S167.

With the Aquadex System, medical practitioners can specify and control the amount of fluid to be extracted at a safe, predictable, and effective rate. The Aquadex System has been shown to have no clinically significant impact on electrolyte balance, blood pressure or heart rate.¹⁸ Unlike other forms of ultrafiltration, which typically require administration specifically by a nephrologist, the Aquadex System may be prescribed by any physician and administered by a healthcare provider, both of whom have received training in extracorporeal therapies.

Benefits of the Aquadex System

The Aquadex System offers a safe approach to treating fluid overload and:

- Reduces hospitalization by 81%¹⁹ compared to diuretics;
- Rehospitalizations with Aquadex were 48% lower than the national average at 30 days;¹⁹
- Reduces length of hospital stay when initiated early, resulting in average savings of \$3,975 (14%);²⁰⁻²¹
- No significant changes to kidney function;¹⁹
- Stabilizes or improves cardiac hemodynamics;²²⁻²⁵
- Predictably removes excess fluid;
- Safe, easy-to-use, and flexible in application;
- Provides complete control over rate and total volume of fluid removed by allowing a medical practitioner to specify the amount of fluid to be removed from each individual patient;
- Can be performed via peripheral or central venous access;
- Removes isotonic fluid (extracts sodium while sparing potassium and magnesium);²⁶
- Following ultrafiltration, neurohormonal activation is reset toward a more physiological condition and diuretic efficacy is restored;²⁷
- Provides highly automated operation with only one setting required to begin therapy;
- Utilizes a single-use, disposable auto-loading blood filter circuit that facilitates easy set-up; and
- Has a built-in console that guides the medical practitioner through the setup and operational process.

Components of the Aquadex System

The Aquadex System consists of:

- A console, a piece of capital equipment containing electromechanical pumps, an LCD screen and stand;
- A one-time disposable blood circuit set, an integrated collection of tubing, filter, sensors, and connectors that contain and deliver the blood from and back to the patient; and
- A disposable catheter, a small, dual-lumen, extended length catheter designed to access the peripheral venous system of the patient and to simultaneously withdraw blood and return filtered blood to the patient.

¹⁸ SAFE Trial: Jaski BE, et al. *J Card Fail.* 2003 Jun; 9(3): 227-231; RAPID Trial: Bart BA, et al. *J Am Coll Cardiol.* 2005 Dec 6; 46(11): 2043-2046.

¹⁹ Watson R et al. *J Cardiac Fail.* 2020; 26(10): s56.

²⁰ Kiziltepe, U, et al. *Ann Thorac Surg.* 2001;71(2): 684-93.

²¹ Sahoo, TK, et al. *Indian J Thorac Cardiovas Surg.* 2007;23(2): 116-24.

²² Boga et al. *Perfusion.* 2000;15:143-50.

²³ Onoe et al. *Perfusion.* 2001;16:37-42.65.

²³ Costanzo MR et al. *JACC.* 2005; 46(11); 2457-51.

²⁵ Costanzo, et. al., ISPOR 23rd Annual Int'l Mtg., May 19-23, 2018, Baltimore, MD, USA.

²⁶ Ali SS, et al. *Congest Heart Fail.* 2009; 15(1):1-4.

²⁷ Marenzi G, et al. *J Am Coll Cardiol.* 2001 Oct; 38(4): 963-968.

The Aquadex blood circuit set is proprietary, and the Aquadex System can only be used with the Aquadex blood circuit set. The dual lumen extended length catheter (dELC) is designed for use with the Aquadex System, although it is one of many potential catheter options available to the healthcare provider.

Corporate Information

Nuwellis, Inc. was incorporated in Delaware on August 22, 2002. We began operating our business in November 1999 through Sunshine Heart Company Pty Limited, which was a wholly owned Australian subsidiary of Nuwellis, Inc. Our common stock began trading on the Nasdaq Capital Market on February 16, 2012.

Our principal executive offices are located at 12988 Valley View Road, Eden Prairie, Minnesota 55344, and our telephone number is (952) 345-4200. Our website address is www.nuwellis.com. Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to reports filed pursuant to Sections 13(a) and 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") will be made available free of charge on our website as soon as reasonably practicable after we electronically file such material with, or furnish it to, the Securities and Exchange Commission ("SEC"). These reports are also available on the SEC's website, www.sec.gov. The information on, or that may be accessed through, our website is not incorporated by reference into and should not be considered a part of this prospectus or the registration statement of which it forms a part.

We are, and will remain, a "smaller reporting company" as long as our public float remains less than \$250 million as of the last business day of our most recently-completed second fiscal quarter. A smaller reporting company may take advantage of specified reduced reporting and other requirements that are otherwise applicable generally to U.S. public companies. As long as our public float remains below \$75 million as of the last business day of our most recently completed second fiscal quarter, we are exempt from the attestation requirement in the assessment of our internal control over financial reporting by our independent auditors pursuant to Section 404(b) of the Sarbanes-Oxley Act of 2002 ("SOX"), but are required to make our own internal assessment of the effectiveness of our internal control over financial reporting.

The Offering

Units offered by us

Up to [•] Units, each consisting of one share of our Series J Convertible Preferred Stock (for a total of up to [•] shares of Series J Convertible Preferred Stock) and one Warrant (for a total of up to [•] Warrants) to purchase one-half of one share (0.5) of our Series J Convertible Preferred Stock (for a total of up to [•] shares of Series J Convertible Preferred Stock), on a best-efforts basis. The Units have no stand-alone rights and will not be certificated or issued as stand-alone securities. The Series J Convertible Preferred Stock and Warrants are immediately separable and will be issued separately in this offering.

This offering also relates to the shares of Series J Convertible Preferred Stock issuable as PIK dividends and the shares of common stock issuable upon conversion of the Series J Convertible Preferred Stock.

Series J Convertible Preferred Stock— Original Issue Discount

The assumed public offering price of \$[•] per Unit reflects the issuance of the Series J Convertible Preferred Stock with an original issue discount (“OID”) of [•]% of the stated value (\$25.00).

Series J Convertible Preferred Stock— Maturity Date

The Series J Convertible Preferred Stock matures three (3) years from the Closing Date.

Series J Convertible Preferred Stock— Conversion Rights

Each share of Series J Convertible Preferred Stock is convertible at the option of the holder at any time into shares of our common stock at a fixed assumed conversion price of \$[•] (the “Conversion Price”) (based on the closing price of our common stock on the Nasdaq Capital Market on [•], 2023, which Conversion Price is subject to adjustment. The Conversion Price will equal the closing price of our common stock on the Nasdaq Capital market on the date on which the registration statement of which this prospectus forms a part is declared effective by the SEC. The Conversion Price is subject to adjustment for: (i) the payment of stock dividends or other distributions payable in common stock on the outstanding shares of our common stock, excluding the shares of common stock issuable upon the conversion of the Series J Convertible Preferred Stock; and (ii) subdivisions and combinations (including by way of a reverse stock split).

This offering also relates to the shares of common stock issuable upon conversion of the Series J Convertible Preferred Stock.

See “Description of Securities Being Offered—Series J Convertible Preferred Stock Being Offered Pursuant to this Prospectus—Conversion”.

Series J Convertible Preferred Stock—Mandatory Redemption

If any shares of our Series J Convertible Preferred Stock are outstanding at the end of the three-year term, then we shall 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 third-year anniversary of the Closing Date (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.

See “Description of Securities Being Offered—Series J Convertible Preferred Stock Being Offered Pursuant to this Prospectus—Mandatory Redemption.

Series J Convertible Preferred Stock—Dividends

The Certificate of Designation of Preferences, Rights and Limitations (the “Certificate of Designations”) shall provide that dividends on the Series J Convertible Preferred Stock shall be paid in-kind (“PIK dividends”) in additional shares of Series J Convertible Preferred Stock based on the stated value of \$25.00 per share at an assumed dividend rate of [•]% per annum. 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 of record at the close of business at the end of [•], [•], [•] and [•] of each year (each a “Dividend Record Date”) at the quarterly dividend rate of [•]% (the “Quarterly Dividend Rate”). PIK dividends on each share of Series J Convertible Preferred Stock shall be paid within three business days of each Dividend Record Date in additional fully paid and nonassessable, registered shares of Series J Convertible Preferred Stock in a number equal to the quotient obtained by dividing (A) the product obtained by multiplying (i) the Quarterly Dividend Rate and (ii) the stated value of \$25.00 per share, by (B) the public offering price per Unit.

See “Description of Securities Being Offered—Series J Convertible Preferred Stock Being Offered Pursuant to this Prospectus—Dividends”.

Series J Convertible Preferred Stock— Limited Voting Rights

Holders of the Series J Convertible Preferred Stock will not have any voting rights, except as described below or as otherwise required by law.

In any matter in which the Series J Convertible Preferred Stock may vote (as expressly provided herein

or as may be required by law), each share of Series J Convertible Preferred Stock will be entitled to one vote per share. So long as any shares of Series J Convertible Preferred Stock remain outstanding, we will not, without the consent or the affirmative vote of a majority of the outstanding shares of Series J Convertible Preferred Stock, given in person or by proxy, either in writing without a meeting or by vote at any meeting called for the purpose:

- (i) alter or change adversely the powers, preferences or rights given to the Series J Convertible Preferred Stock or alter or amend adversely the Certificate of Designations;
- (ii) increase the number of authorized shares of Series J Convertible Preferred Stock; or
- (iii) enter into any agreement with respect to any of the foregoing.

See “Description of Securities Being Offered—Series J Convertible Preferred Stock Being Offered Pursuant to this Prospectus—Limited Voting Rights”.

Series J Convertible Preferred Stock—Liquidation Rights

In the event of the voluntary or involuntary liquidation, dissolution or winding up of our affairs, the holders of shares of Series J Convertible Preferred Stock will be entitled to be paid out of our assets legally available for distribution to our stockholders (*i.e.*, after satisfaction of all our liabilities to creditors, if any) and, subject to the rights of holders of any shares of each other class or series of capital stock ranking, as to rights to the distribution of assets upon our voluntary or involuntary liquidation, dissolution or winding-up, senior to the Series J Convertible Preferred Stock, a liquidation preference of \$25.00 per share, before any distribution or payment may be made to holders of shares of common stock or any other class or series of our capital stock ranking, as to rights to the distribution of assets upon any voluntary or involuntary liquidation, dissolution or winding up, junior to the Series J Convertible Preferred Stock. See “Description of Securities Being Offered—Series J Convertible Preferred Stock Being Offered Pursuant to this Prospectus—Ranking and Liquidation Preference”.

Series J Convertible Preferred Stock—Fundamental Transactions

In the event of a Fundamental Transaction (as defined in the Certificate of Designations) and generally including any reorganization, recapitalization or reclassification of our common stock, the sale, transfer or other disposition of all or substantially all of our assets, our consolidation or merger with or into another person, or the acquisition of more than 50% of our outstanding common stock, the holders of the Series J

Warrants	<p>Convertible Preferred Stock will be entitled to receive upon conversion of the Series J Convertible Preferred Stock the kind and amount of securities, cash or other property that the holders would have received had they converted the Series J Convertible Preferred Stock immediately prior to such Fundamental Transaction (without regard to the Beneficial Ownership Limitation).</p> <p>See “Description of Securities Being Offered—Series J Convertible Preferred Stock Being Offered Pursuant to this Prospectus—Fundamental Transactions”.</p>
Best Efforts Offering	<p>Each Warrant will have an exercise price of \$[•] (50.0% of the public offering price per Unit) per one-half of one share of Series J Convertible Preferred Stock, be exercisable for one-half of one (0.5) share of Series J Convertible Preferred Stock, will be immediately exercisable and will expire three (3) years from the Closing Date. No fractional shares will be issued in connection with the exercise of a Warrant. In lieu of fractional shares, we will pay the holder an amount in cash equal to the fractional amount multiplied by the stated value of \$25.00 per share of Series J Convertible Preferred Stock. The terms of the Warrants will be governed by a Warrant Agency Agreement, dated as of the closing date of this offering, between us and Equiniti Trust Company, LLC, and any successor warrant agent under thereunder (collectively, the “Warrant Agent”). For more information regarding the Warrants, you should carefully read the section titled “Description of Securities Being Offered—Description of Warrants Included in the Units” in this prospectus. You should also read the form of Warrant Agency Agreement, which is filed as an exhibit to the registration statement of which this prospectus forms a part. This offering also relates to the shares of Series J Convertible Preferred Stock issuable upon exercise of the Warrants.</p> <p>We have agreed to offer and sell the securities offered hereby to the purchasers through the placement agents. The placement agents are not required to buy or sell any specific number or dollar amount of the securities offered hereby, but they will use their reasonable best efforts to solicit offers to purchase the securities offered by this prospectus. See “Plan of Distribution” on page 56 of this prospectus.</p>
Common Stock Outstanding Prior To Offering	<p>1,864,265 shares as of September 8, 2023.</p>
Common Stock Anticipated After the Offering	<p>Approximately [•] shares based on an assumed conversion price of the Series J Convertible Preferred Stock of \$[•] (assuming conversion of all of the shares of Series J Convertible Preferred Stock issued in this</p>

Use of proceeds	<p>offering, including conversion of the PIK dividend shares and the shares of Series J Convertible Preferred Stock issued upon exercise of the Warrants).</p>
Exchange listing	<p>We estimate that the net proceeds to us from the offering will be approximately \$[*] million (calculated based on an assumed price of \$[*] per Unit), after deducting the placement agent fees and estimated offering expenses payable by us, and assuming the sale of all Units offered hereby and no exercise of Warrants. However, this is a best efforts offering with no minimum number of securities or amount of proceeds as a condition to closing, and we may not sell all or any of these securities offered pursuant to this prospectus; as a result, we may receive significantly less in net proceeds. We intend to use the proceeds of this offering for working capital and for general corporate purposes. See “Use of Proceeds” for a more complete description of the intended use of proceeds from this offering.</p> <p>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. Without an active trading market, the liquidity of the Series J Convertible Preferred Stock and the Warrants will be limited.</p>
Transfer agent and Warrant agent	<p>Our common stock is listed on The Nasdaq Capital Market under the symbol “NUWE”.</p> <p>The registrar, transfer agent and dividend and redemption price disbursing agent in respect of the Series J Convertible Preferred Stock, and the warrant agent for the Warrants, will be Equiniti Trust Company, LLC.</p>
Form	<p>The Series J Convertible Preferred Stock and the Warrants will be represented by one or more global certificates in definitive, fully registered form deposited with Equiniti Trust Company, LLC, as custodian on behalf of The Depository Trust Company (“DTC”), or DTC, and registered in the name of Cede & Co., a nominee of DTC, or as otherwise directed by DTC.</p>
Settlement	<p>Delivery of the Series J Convertible Preferred Stock and the Warrants offered hereby will settle delivery versus payment (“DVP”)/receipt versus payment (“RVP”).</p>
Material U.S. Federal Income Tax Consequences	<p>For a discussion of certain U.S. federal income tax consequences the purchase, ownership, disposition and conversion of the Series J Convertible Preferred Stock, the acquisition, ownership and disposition of our</p>

common stock received upon conversion of the Series J Convertible Preferred Stock, and the purchase, ownership, disposition and exercise of the Warrants, please see the section entitled “Material U.S. Federal Income Tax Consequences.” You should consult your independent tax advisor with respect to the U.S. federal income tax consequences of owning the Series J Convertible Preferred Stock, the common stock received upon conversion of the Series J Convertible Stock, and the Warrants in light of your own particular situation and with respect to any tax consequences arising under non-U.S. federal income tax laws, including the laws of any other taxing jurisdiction.

Risk Factors

Investing in our securities involves a high degree of risk. You should carefully review and consider the section of this prospectus entitled “Risk Factors” on page [13](#) of this prospectus for a discussion of factors to consider before deciding to invest in this offering.

Except as otherwise indicated, all information in this prospectus is based on 1,864,265 shares of common stock outstanding as of September 8, 2023 and excludes the following:

- 111,960 shares of our common stock issuable upon the exercise of outstanding stock options, having a weighted average exercise price of \$36.70 per share;
- 1,308,271 shares of our common stock issuable upon the exercise of outstanding warrants (other than the warrants offered hereby) with a weighted-average exercise price of \$35.51 per share;
- 5,080 shares of our common stock issuable upon the conversion of the 127 outstanding shares of our Series F Preferred Stock; and
- 48,771 shares of our common stock reserved for future issuance under our equity incentive plans.

Except as otherwise noted, all information in this prospectus assumes:

- the conversion of the Series J Convertible Preferred Stock sold in this offering; and
- no exercise of the Warrants issued in connection with this offering.

To the extent that additional shares of common stock are issued upon the exercise of outstanding options or warrants, or the conversion of our outstanding Series F Convertible Preferred Stock, or the vesting of restricted stock units or additional grants are made pursuant to our equity incentive plans, there will be dilution to new investors. All share and per share amounts for all periods presented in this prospectus and the registration statement of which it forms a part have been retroactively adjusted to reflect the reverse stock splits we previously effected on January 12, 2017, October 12, 2017, January 2, 2019, October 16, 2020 and December 9, 2022.

SUMMARY RISK FACTORS

Our business is subject to a number of risks. The principal factors and uncertainties include, among others:

- We have limited history of operations and limited experience in sales and marketing, and we might be unsuccessful in increasing our sales and cannot assure you that we will ever generate substantial revenue or be profitable.
- We have incurred operating losses since our inception and anticipate that we will continue to incur operating losses in the near-term. To date, we have been funded by equity financings, and although we believe that we will be able 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. If this financing is not successful or if we raise less than we intend, we will need to raise additional capital to fund our operations beyond the fourth quarter of 2023. If additional capital is not available, we will have to delay, reduce or cease operations. These factors raise substantial doubt about the Company's ability to continue as a going concern through the next twelve months.
- Our near-term prospects are highly dependent on revenues from a single product, the Aquadex System. We face significant challenges in expanding market acceptance of the Aquadex System, which could adversely affect our potential sales.
- We depend on a limited number of customers, the loss of which, or failure of which to order our products in a particular period, could cause our revenues to decline.
- We have limited commercial manufacturing experience and could experience difficulty in producing commercial volumes of the Aquadex System and related components or may need to depend on third parties for manufacturing.
- We depend upon third-party suppliers, including single source suppliers, making us vulnerable to supply problems and price fluctuations.
- The COVID-19 outbreak and other public health threats or outbreaks of communicable diseases could have a material adverse effect on our operations and overall financial performance.
- We have been negatively impacted by the prioritization of COVID-19 patients in hospitals.
- If we cannot develop adequate distribution, customer service and technical support networks, then we may not be able to market and distribute the Aquadex System effectively and our sales will suffer.
- We compete against many companies, some of which have longer operating histories, more established products and greater resources than we do, which may prevent us from achieving further market penetration or improving operating results.
- The competition for qualified personnel is particularly intense in our industry. If we are unable to retain or hire key personnel, we may not be able to sustain or grow our business.
- Significant additional governmental regulation could subject us to unanticipated delays which would adversely affect our sales.
- Product defects, resulting in lawsuits for product liability, could harm our business, results of operations and financial condition.
- We may face significant risks associated with international operations, which could have a material adverse effect on our business, financial condition and results of operations.
- If we are not able to maintain sufficient quality controls, then the approval or clearance of our products by the European Union, the FDA or other relevant authorities could be withdrawn, delayed or denied and our sales will suffer.
- If we violate any provisions of the Federal Food, Drug, and Cosmetic Act ("FDC Act") or any other statutes or regulations, then we could be subject to enforcement actions by the FDA or other governmental agencies.
- We cannot assure you that our products will be safe or that there will not be serious injuries or product malfunctions. Further, we are required under applicable law to report any circumstances relating to our

medically approved products that could result in deaths or serious injuries. These circumstances could trigger recalls, class action lawsuits and other events that could cause us to incur expenses and may also limit our ability to generate revenues from such products.

- We face significant uncertainty in the industry due to government healthcare reform.
- We are subject, directly or indirectly, to United States federal and state healthcare fraud and abuse and false claims laws and regulations. Prosecutions under such laws have increased in recent years and we may become subject to such litigation. If we are unable to, or have not fully complied with such laws, we could face substantial penalties.
- Failure to comply with anti-bribery, anti-corruption, and anti-money laundering laws could subject us to penalties and other adverse consequences.
- If we acquire other businesses, products or technologies, we could incur additional impairment charges and will be subject to risks that could hurt our business.
- We may not be able to protect our intellectual property rights effectively, which could have an adverse effect on our business, financial condition or results of operations.
- Intellectual property litigation could be costly and disruptive to us.
- If we were unable to protect the confidentiality of our proprietary information and know-how, the value of our technology and system could be adversely affected.
- Our products could infringe patent rights of others, which may require costly litigation and, if we are not successful, could cause us to pay substantial damages or limit our ability to commercialize our products.
- We may be subject to claims that our employees have wrongfully used or disclosed alleged trade secrets of their former employers.
- Security breaches, loss of data and other disruptions could compromise sensitive information related to our business or prevent us from accessing critical information and expose us to liability, which could adversely affect our business and our reputation.
- The trading price of our common stock price has been, and could continue to be, volatile.
- The rights of holders of our capital stock will be subject to, and could be adversely affected by, the rights of holders of our outstanding preferred stock and stock that may be issued in the future.
- A more active, liquid trading market for our common stock may not develop, and the price of our common stock may fluctuate significantly.
- Our ability to use U.S. net operating loss carryforwards and other tax attributes might be limited.
- We do not intend to pay cash dividends on our common stock in the foreseeable future.
- Investors in Units may have to pay taxes (or have taxes withheld) in certain circumstances with respect to our Series J Convertible Preferred Stock or the Warrants, even though holders would not receive any cash.
- There may be future sales of our securities or other dilution of our equity, which may adversely affect the market price of our common stock.
- This is a best-efforts offering, no minimum amount of securities is required to be sold, and we may not raise the amount of capital we believe is required for our business plans.

RISK FACTORS

An investment in our securities has a high degree of risk. Before you invest you should carefully consider the risks and uncertainties described below, the other information in this prospectus, and under the caption “Risk Factors” in our [Annual Report on Form 10-K for the year ended December 31, 2022](#) and our Quarterly Reports on Form 10-Q for the quarterly periods ended [March 31, 2023](#) and [June 30, 2023](#), each of which is incorporated by reference and the other information in this prospectus. Any of the risks and uncertainties set forth herein could materially and adversely affect our business, results of operations and financial condition, which in turn could materially and adversely affect the trading price or value of our securities. Additional risks not currently known to us or which we consider immaterial based on information currently available to us may also materially adversely affect us. As a result, you could lose all or part of your investment.

Risks 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.

On May 31, 2022, we received a notice from the Staff of Nasdaq informing us that because the closing bid price for our common stock listed on Nasdaq was below \$1.00 for 30 consecutive trading days, we were not in compliance with the Minimum Bid Price Requirement for continued listing on the Nasdaq Capital Market, as set forth in Nasdaq Marketplace Rule 5550(a)(2).

In accordance with Nasdaq Marketplace Rule 5810(c)(3)(A), the Company had a period of 180 calendar days from May 31, 2022, or until November 28, 2022, to regain compliance with the Minimum Bid Price Requirement.

On December 9, 2022, we effected a 1-for-100 reverse split of our outstanding common stock. This reverse stock split did not change the par value of our common stock or the number of common or preferred shares authorized by our Certificate of Incorporation. On December 27, 2022, Nasdaq notified the Company that it had regained compliance with Listing Rule 5550(a)(2).

Our ability to effectuate another reverse stock split in the future may be limited. If a Company fails to meet the continued listing requirement for minimum bid price and the Company has effected one or more reverse stock splits over the prior two-year period with a cumulative ratio of 250 shares or more to one, then the Company shall not be eligible for any compliance period specified in Nasdaq Marketplace Rule 5810(c)(3)(A) and the Staff of Nasdaq will issue a delisting determination.

If our common stock is ever 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 ever 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 our Company; 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.

Sales of a substantial number of shares of our common stock by our stockholders in the public market could cause our stock price to fall.

The number of shares of common stock issuable upon conversion of our outstanding preferred stock and exercise of outstanding warrants is significant in relation to the number of shares of our common stock currently outstanding.

As of September 8, 2023, we have warrants to purchase 1,308,271 shares of common stock outstanding, with exercise prices ranging from \$3.2996 to \$189,000 with a weighted-average exercise price of \$35.51.

As of September 8, 2023, there were 127 shares of Series F Preferred Stock outstanding, convertible into 5,080 shares of common stock. The certificate of designation for our Series F Preferred Stock contains an anti-dilution provision, which provision requires the lowering of the applicable conversion price, as then in effect, to the purchase price per share of common stock or common stock equivalents issued in the future. If the effective price per share on a common-stock equivalent basis in a future equity offering is lower than the then-current conversion price of the Series F Convertible Preferred Stock, then such conversion price shall be reduced to such lower price and additional shares of common stock will be issuable upon the conversion of the of the Series F Convertible Preferred Stock. To the extent the outstanding shares of Series F Convertible Preferred Stock become exercisable for additional shares of common stock, holders of our common stock will experience further dilution.

If any security holder determines to sell a substantial number of shares into the market at any given time, there may not be sufficient demand in the market to purchase the shares without a decline in the market price for our common stock. Moreover, continuous sales into the market of a number of shares in excess of the typical trading volume for our common stock could depress the trading market for our common stock over an extended period of time.

Sales of a substantial number of shares of our common stock in the public market or the perception that these sales might occur could significantly reduce the market price of our common stock and impair our ability to raise adequate capital through the sale of additional equity securities. We are unable to predict the effect that such sales may have on the prevailing market price of our common stock. As of September 8, 2023, we have outstanding warrants to purchase an aggregate of approximately 1,308,271 shares of our common stock, and options to purchase an aggregate of approximately 111,960 shares of our common stock, which, if exercised, may further increase the number of shares of our common stock outstanding and the number of shares eligible for resale in the public market.

Our business could be negatively affected as a result of actions of activist stockholders, and such activism could impact the trading value of our securities.

Stockholders may, from time to time, engage in proxy solicitations or advance stockholder proposals, or otherwise attempt to effect changes and assert influence on our board of directors and management. Activist campaigns that contest or conflict with our strategic direction or seek changes in the composition of our board of directors could have an adverse effect on our operating results and financial condition. A proxy contest would require us to incur significant legal and advisory fees, proxy solicitation expenses and administrative and associated costs and require significant time and attention by our board of directors and management, diverting their attention from the pursuit of our business strategy. Any perceived uncertainties as to our future direction

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and control, our ability to execute on our strategy, or changes to the composition of our board of directors or senior management team arising from a proxy contest could lead to the perception of a change in the direction of our business or instability which may result in the loss of potential business opportunities, make it more difficult to pursue our strategic initiatives, or limit our ability to attract and retain qualified personnel and business partners, any of which could adversely affect our business and operating results. If individuals are ultimately elected to our board of directors with a specific agenda, it may adversely affect our ability to effectively implement our business strategy and create additional value for our stockholders. We may choose to initiate, or may become subject to, litigation as a result of the proxy contest or matters arising from the proxy contest, which would serve as a further distraction to our board of directors and management and would require us to incur significant additional costs. In addition, actions such as those described above could cause significant fluctuations in our stock price based upon temporary or speculative market perceptions or other factors that do not necessarily reflect the underlying fundamentals and prospects of our business.

We have a large number of authorized but unissued shares of stock, which could negatively impact a potential investor if they purchased our common stock.

On December 9, 2022, we effected a 1-for-100 reverse split of our outstanding common stock. This reverse stock split did not change the par value of our common stock or the number of common or preferred shares authorized by our Certificate of Incorporation. Because the number of authorized shares of our common stock was not reduced proportionately, the reverse stock split increased our board of directors' ability to issue authorized and unissued shares without further stockholder action. As of September 8, 2023, our certificate of incorporation provides for 100,000,000 shares of authorized common stock and 40,000,000 shares of authorized preferred stock, 30,000 of which are designated Series A Junior Participating Preferred Stock, 127 of which are designated Series F Preferred Stock, and we have 1,864,265 shares of common stock outstanding, 1,425,311 shares reserved for issuance upon the conversion, exercise or vesting of outstanding preferred stock, warrants and options, and 48,771 shares of common stock reserved for future grant under the Company's equity incentive plans.

With respect to authorized but unissued and unreserved shares, we could also use such shares to oppose a hostile takeover attempt or delay or prevent changes in control or changes in or removal of management. The issuance of additional shares of common stock or securities convertible into common stock may have a dilutive effect on earnings per share and relative voting power and may cause a decline in the trading price of our common stock. We could use the shares that are available for future issuance in dilutive equity financing transactions, or to oppose a hostile takeover attempt or delay or prevent changes in control or changes in or removal of management, including transactions that are favored by a majority of the stockholders or in which the stockholders might otherwise receive a premium for their shares over then-current market prices or benefit in some other manner.

We will continue to incur increased costs as a result of being a U.S. reporting company.

In connection with the effectiveness of our registration statement on Form 10, as of February 14, 2012, we became subject to the periodic reporting requirements of the Exchange Act. Although we were previously listed on the Australian Securities Exchange and had been required to file financial information and make certain other filings with the Australian Securities Exchange, our status as a U.S. reporting company under the Exchange Act has caused us, and will continue to cause us, to incur additional legal, accounting and other expenses that we did not previously incur, including costs related to compliance with the requirements of SOX and the listing requirements of the Nasdaq Capital Market. We expect these rules and regulations will continue to increase our legal and financial compliance costs and make some activities more time-consuming and costly, and these activities may increase general and administrative expenses and divert management's time and attention away from revenue-generating activities. Furthermore, now that we are a revenue-generating company following the acquisition of the Aquadex Business in August 2016, our costs to comply with regulations applicable to U.S. reporting companies may further increase. We also expect these rules and regulations may make it more difficult and more expensive for us to obtain director and officer liability insurance and we may be required to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. As a result, it may be more difficult for us to attract and retain qualified individuals to serve on our board of directors or as executive officers.

Investors could lose confidence in our financial reports, and the value of our common stock may be adversely affected, if our internal controls over financial reporting are found not to be effective by management or by an independent registered public accounting firm or if we make disclosure of existing or potential material weaknesses in those controls.

As long as we remain a non-accelerated filer, we are exempt from the attestation requirement in the assessment of our internal control over financial reporting by our independent auditors pursuant to section 404(b) of SOX, but are required to make our own internal assessment of the effectiveness of our internal controls over financial reporting.

We continue to evaluate our existing internal controls over financial reporting. During the course of our ongoing evaluation of the internal controls, we may identify areas requiring improvement and may have to design enhanced processes and controls to address issues identified through this review. Remediating any deficiencies, significant deficiencies or material weaknesses that we or our independent registered public accounting firm may identify may require us to incur significant costs and expend significant time and management resources. We cannot assure you that any of the measures we implement to remedy any such deficiencies will effectively mitigate or remedy such deficiencies. The existence of one or more material weaknesses could affect the accuracy and timing of our financial reporting. It may be more difficult for us to manage our internal control over financial reporting following our acquisition of the Aquadex Business now that we are a revenue generating company. Investors could lose confidence in our financial reports, and the value of our common stock may be harmed, if our internal controls over financial reporting are found not to be effective by management or by our independent registered public accounting firm or if we make disclosure of existing or potential material weaknesses in those controls.

Our Fourth Amended and Restated Certificate of Incorporation, as amended, provides that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, or employees.

Our Fourth Amended and Restated Certificate of Incorporation, as amended, provides that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will be the exclusive forum for any derivative action or proceeding brought on our behalf; any action asserting a breach of fiduciary duty; any action asserting a claim against us arising pursuant to the Delaware General Corporation Law (the "DGCL"); or any action asserting a claim against us that is governed by the internal affairs doctrine. This choice of forum provision does not preclude or contract the scope of exclusive federal or concurrent jurisdiction for any actions brought under the Securities Act of 1933 ("Securities Act") or the Exchange Act. Accordingly, our exclusive forum provision will not relieve us of our duties to comply with the federal securities laws and the rules and regulations thereunder, and our stockholders will not be deemed to have waived our compliance with these laws, rules and regulations.

Any person or entity purchasing or otherwise acquiring any interest in any of our securities shall be deemed to have notice of and consented to these provisions. These exclusive-forum provisions may limit a stockholder's ability to bring a claim in a judicial forum of its choosing for disputes with us or our directors, officers or other employees, which may discourage lawsuits against us and our directors, officers and other employees.

If a court were to find the choice of forum provision contained in our Fourth Amended and Restated Certificate of Incorporation, as amended, to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business, results of operations, and financial condition. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management and other employees.

Our certificate of incorporation and bylaws, as well as certain provisions of the DGCL, may delay or deter a change in control transaction.

Certain provisions of our certificate of incorporation and bylaws may have the effect of deterring takeovers, such as those provisions authorizing our board of directors to issue, from time to time, any series of preferred stock and fix the designation, powers, preferences and rights of the shares of such series of preferred stock; prohibiting stockholders from acting by written consent in lieu of a meeting; requiring advance notice of

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stockholder intention to put forth director nominees or bring up other business at a stockholders' meeting; prohibiting stockholders from calling a special meeting of stockholders; requiring a 66 2/3% majority stockholder approval in order for stockholders to amend certain provisions of our certificate of incorporation or bylaws or adopt new bylaws; providing that, subject to the rights of preferred shares, the directors will be divided into three classes and the number of directors is to be fixed exclusively by our board of directors; and providing that none of our directors may be removed without cause. Section 203 of the DGCL, from which we did not elect to opt out, provides that if a holder acquires 15% or more of our stock without prior approval of our board of directors, that holder will be subject to certain restrictions on its ability to acquire us within three years. These provisions may delay or deter a change in control of us, and could limit the price that investors might be willing to pay in the future for shares of our common stock.

We are a “smaller reporting company” under federal securities laws and we cannot be certain whether the reduced reporting requirements applicable to such companies will make our common stock less attractive to investors.

We are a “smaller reporting company” under federal securities laws. For as long as we continue to be a smaller reporting company, we may take advantage of exemptions from various reporting requirements that are applicable to other public companies, including reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements. We will remain a smaller reporting company so long as our public float remains less than \$250 million as of the last business day of our most recently completed second fiscal quarter. We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may decline or be more volatile.

Stockholder litigation could divert the attention of management from the day-to-day operation of our business or result in us incurring substantial costs and liabilities.

We cannot be sure that our stockholders will not initiate securities litigation against us in the future. If securities or stockholder derivative litigation were to be commenced against us, our defense of such litigation could divert the attention of management from the day-to-day operation of our business or result in us incurring substantial costs and liabilities, irrespective of the merits of the litigation.

Risks Relating to this Offering

Because our management will have broad discretion and flexibility in how the net proceeds from this offering are used, our management may use the net proceeds in ways with which you disagree or which may not prove effective.

We currently intend to use the net proceeds from this offering as discussed under “Use of Proceeds” in this prospectus. We have not allocated specific amounts of the net proceeds from this offering for any of the foregoing purposes. Accordingly, our management will have significant discretion and flexibility in applying the net proceeds of this offering. You will be relying on the judgment of our management with regard to the use of these net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the net proceeds are being used appropriately. It is possible that the net proceeds will be invested in a way that does not yield a favorable, or any, return for us. The failure of our management to use such funds effectively could have a material adverse effect on our business, financial condition, operating results and cash flow.

This is a best-efforts offering, no minimum amount of securities is required to be sold, and we may not raise the amount of capital we believe is required for our business plans.

The placement agents have agreed to use their reasonable best efforts to solicit offers to purchase the securities in this offering. The placement agents have no obligation to buy any of the securities from us or to arrange for the purchase or sale of any specific number or dollar amount of the securities. There is no required minimum number of securities that must be sold as a condition to completion of this offering. Because there is no minimum offering amount required as a condition to the closing of this offering, the actual offering amount, placement agent fees and proceeds to us are not presently determinable and may be substantially less than the maximum amounts set forth herein. We may sell fewer than all of the securities offered hereby, which may significantly reduce the amount of proceeds received by us, and investors in this offering will not receive a

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refund in the event that we do not sell an amount of securities sufficient to support our continued operations. Thus, we may not raise the amount of capital we believe is required for our operations and may need to raise additional funds. Such additional fundraises may not be available or available on terms acceptable to us.

The Series J Convertible Preferred Stock and the Warrants are unlisted securities and there is no public market for them.

There is no established public trading market for, and we do not expect a market to develop for the Series J Convertible Preferred Stock or the Warrants. In addition, neither the Series J Convertible Preferred Stock nor the Warrants are listed, and we do not intend to apply for listing of the Series J Convertible Preferred Stock or the Warrants on any securities exchange or trading system. Without an active market, the liquidity of the Series J Convertible Preferred Stock and the Warrants is limited, and investors may be unable to liquidate their investments in the Series J Convertible Preferred Stock or the Warrants.

The Warrants in this offering are speculative in nature.

Following this offering, the market value of the Warrants, if any, is uncertain and there can be no assurance that the market value of the Warrants will equal or exceed their imputed public offering price. In the event that the price of our Series J Convertible Preferred Stock does not exceed the exercise price of the Warrants during the period when such Warrants are exercisable, such Warrants may not have any value. Furthermore, each Warrant will expire three (3) years from the Closing Date.

Holders of the Warrants will not have rights of holders of our shares of our Series J Convertible Preferred Stock until such Warrants are exercised.

The Warrants in this offering do not confer any rights of share ownership on their holders, but rather merely represent the right to acquire shares of our Series J Convertible Preferred Stock at a fixed price upon exercise thereof. Until holders of Warrants acquire shares of our Series J Convertible Preferred Stock upon exercise of the Warrants, as applicable, holders of Warrants will have no rights with respect to our shares of Series J Convertible Preferred Stock underlying such Warrants.

The value of our Series J Convertible Preferred Stock is directly tied to the value of our common stock, and any change in the value of our common stock will be reflected in the value of our Series J Convertible Preferred Stock.

There is no established public trading market for and we do not expect a market to develop for the Series J Convertible Preferred Stock. In addition, we do not intend to apply for listing of the Series J Convertible Preferred Stock on any national securities exchange or other nationally recognized trading system. As a result, because each share of Series J Convertible Preferred Stock is initially convertible into one share of common stock, subject to certain beneficial ownership limitations, we expect the value of the Series J Convertible Preferred Stock to have a value directly tied to the value of our common stock. Accordingly, any change in the trading price of our common stock will be reflected in the value of our Series J Convertible Preferred Stock, and the price of our common stock may be volatile as described above.

The conversion of the Series J Convertible Preferred Stock into shares of common stock would dilute the current holders of our common stock. In addition, the exercise or conversion of currently outstanding securities would further dilute holders of our common stock.

These issuance of the approximate additional [*] shares of our common stock upon conversion of all of the shares of Series J Convertible Preferred Stock issued in this Offering, including conversion of the PIK dividends shares and the shares of Series J Convertible Preferred Stock issued upon exercise of the Warrants, would dilute our stockholders' ownership interest, which among other things would have the effect of reducing their influence on matters on which our stockholders vote.

Because we do not intend to pay cash dividends, our stockholders will benefit from an investment in our securities only if they appreciate in value.

We intend to retain our future earnings, if any, to finance the expansion of our business and do not expect to pay any cash dividends in the foreseeable future. As a result, the success of an investment in our securities will depend entirely upon any future appreciation. There is no guarantee that our securities will appreciate in value or even maintain the price at which our stockholders purchased their shares.

Purchasers in this offering may experience dilution of their investment in the future.

Subject to lock-up provisions described under “Plan of Distribution,” we are generally not restricted from issuing additional securities, including shares of common stock, securities that are convertible into or exchangeable for, or that represent the right to receive, common stock or substantially similar securities. The issuance of securities may cause dilution to our stockholders, including investors in this offering. In order to raise additional capital, such securities may be at prices that are not the same as the price per share in this offering. We cannot assure you that we will be able to sell shares or other securities in any other offering at a price per share that is equal to or greater than the price per share paid by investors in this offering, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders, including investors who purchase securities in this offering. The price per share at which we sell additional shares of our common stock or securities convertible into common stock in future transactions may be higher or lower than the price per share in this offering. The exercise of outstanding stock options or warrants and the vesting of outstanding restricted stock units may also result in dilution of your investment.

The terms of our Series J Convertible Preferred Stock could prohibit us from issuing additional equity because of the significant dilutive effects on our common stock.

The Certificate of Designations shall provide that dividends on the Series J Convertible Preferred Stock shall be paid in-kind in additional shares of Series J Convertible Preferred Stock based on the stated value of \$25.00 per share at an assumed annual dividend rate of [•]%. 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 at [•], [•], [•] and [•] of each year (each a “Dividend Record Date”) at the quarterly dividend rate of [•]% (the “Quarterly Dividend Rate”). PIK dividends on each share of Series J Convertible Preferred Stock shall be paid within three business days of each Dividend Record Date in additional fully paid and nonassessable, registered shares of Series J Convertible Preferred Stock in a number equal to the quotient obtained by dividing (A) the product obtained by multiplying (i) the Quarterly Dividend Rate and (ii) the stated value of \$25.00 per share, by (B) the public offering price per Unit (equal to \$[•], based on the assumed public offering price set forth on the cover page of the prospectus), as a result such subsequent issued PIK dividends will be convertible into common stock and could have dilutive effects on our common stock.

Mandatory redemption obligations may make it more difficult for a party to acquire us or discourage a party from acquiring us.

The mandatory redemption feature of the Series J Convertible Preferred Stock may have the effect of discouraging a third party from making an acquisition proposal for us or of delaying, deferring or preventing certain of our change of control transactions under circumstances that otherwise could provide the holders of our common stock and Series J Convertible Preferred Stock with the opportunity to realize a premium over the then-current market price of such stock or that shareholders may otherwise believe is in their best interests.

We may incur additional indebtedness and obligations to pay dividends on preferred stock, some of which may be senior to the rights of the Series J Convertible Preferred Stock.

We and our subsidiaries may incur additional indebtedness and obligations to pay cumulative dividends on preferred stock, some of which may be senior to the rights of the Series J Convertible Preferred Stock. The terms of the Series J Convertible Preferred Stock do not prohibit us or our subsidiaries from incurring additional indebtedness or issuing additional series of preferred stock. Any such indebtedness will in all cases be senior to the rights of holders of Series J Convertible Preferred Stock. We may also issue additional series of preferred stock that contain dividend rights and liquidation preferences that are senior to the rights of holders of Series J Convertible Preferred Stock. Our subsidiaries may also incur indebtedness that is structurally senior to the Series J Convertible Preferred Stock, and we and our subsidiaries could incur indebtedness secured by a lien on our assets, entitling the holders of such indebtedness to be paid first from the proceeds of such assets. If we issue any additional preferred stock that ranks senior or pari passu with the Series J Convertible Preferred Stock, the holders of those shares will be entitled to a senior or ratable share with the holders of the Series J Convertible Preferred Stock in any proceeds distributed in connection with our insolvency, liquidation, reorganization or dissolution. This may have the effect of reducing the amount of proceeds paid to the holders of Series J Convertible Preferred Stock.

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The Series J Convertible Preferred Stock is a new issue of securities does not have an established trading market and we do not intend to list the Series J Convertible Preferred Stock on any national securities exchange or other nationally recognized trading system, which may negatively affect its value and your ability to transfer and sell your shares.

The Series J Convertible Preferred Stock is a new issue of securities and currently no market exists for the Series J Convertible Preferred Stock. In addition, the Series J Convertible Preferred Stock is not listed, and we do not intend to apply for listing of the Series J Convertible Preferred Stock on any national securities exchange or other nationally recognized trading system, including Nasdaq. Without an active market, the liquidity of the Series J Convertible Preferred Stock is limited, and investors may be unable to liquidate their investments in the Series J Convertible Preferred Stock or to sell at a price that you consider reasonable. As a result, the liquidity of the Series J Convertible Preferred Stock will be limited and a holders' ability to transfer or sell the Series J Convertible Preferred Stock and could be adversely affected.

Market interest rates may adversely affect the value of the Series J Convertible Preferred Stock.

One of the factors that continues to influence the price of the Series J Convertible Preferred Stock will be the dividend yield on the Series J Convertible Preferred Stock (as a percentage of the price of the Series J Convertible Preferred Stock) relative to market interest rates. An increase in market interest rates may lead prospective purchasers of the Series J Convertible Preferred Stock to expect a higher dividend yield, and higher interest rates would likely increase our borrowing costs and potentially decrease funds available for dividends. Accordingly, higher market interest rates could cause the market price of the Series J Convertible Preferred Stock to decrease.

The amount of the liquidation preference on the Series J Convertible Preferred Stock is fixed and investors in this offering that receive shares of Series J Convertible Preferred Stock will have no right to receive any greater payment.

The payment due upon liquidation on the Series J Convertible Preferred Stock is fixed at the liquidation preference of \$25.00 per share. If, in the case of our liquidation, there are remaining assets to be distributed after payment of this amount, you will have no right to receive or to participate in these amounts. In addition, if the market price of a holder's Series J Convertible Preferred Stock is greater than the liquidation preference, such holder will have no right to receive the market price from us upon our liquidation.

There may be future sales of Series J Convertible Preferred Stock or similar securities, which may adversely affect the market price of the Series J Convertible Preferred Stock.

Subject to the terms of the Certificate of Designations, our certificate of incorporation, as amended, and the DGCL, we are not restricted from issuing additional Series J Convertible Preferred Stock or securities similar to the Series J Convertible Preferred Stock, including any securities that are convertible into or exchangeable for, or that represent the right to receive, Series J Convertible Preferred Stock. Holders of the Series J Convertible Preferred Stock have no preemptive rights that entitle holders to purchase their pro rata share of any offering of shares of any class or series. The market price of the Series J Convertible Preferred Stock could decline as a result of sales of Series J Convertible Preferred Stock or of other securities made after this offering or the perception that such sales could occur. Because our decision to issue securities in any future offering will depend on market conditions and other factors beyond our control, we cannot predict or estimate the amount, timing or nature of any future offerings. Thus, holders of the Series J Convertible Preferred Stock bear the risk of our future offerings reducing the market price of the Series J Convertible Preferred Stock and diluting their holdings in the Series J Convertible Preferred Stock.

Raising additional funds through debt or equity financing could be dilutive and may cause the market price of the Series J Convertible Preferred Stock to decline. We still may need to raise additional funding which may not be available on acceptable terms, or at all. Failure to obtain additional capital may force us to delay, limit, or terminate our product development efforts or other operations.

To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest may be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a stockholder. Furthermore, any additional fundraising efforts may divert our management from their day-to-day activities, which may adversely affect our ability to develop and

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commercialize our products and services. We may continue to seek funds through equity or debt financings, collaborative or other arrangements with corporate sources, or through other sources of financing. Additional funding may not be available to us on acceptable terms, or at all. Any failure to raise capital as and when needed, as a result of insufficient authorized shares or otherwise, could have a negative impact on our financial condition and on our ability to pursue our business plans and strategies.

The voting rights of holders of the Series J Convertible Preferred Stock are limited and holders of Series J Convertible Preferred Stock will not have the voting rights of holders of our shares of our common stock until such shares of Series J Convertible Preferred Stock are converted into shares of our common stock.

Holders of the Series J Convertible Preferred Stock have no voting rights with respect to matters that generally require the approval of voting stockholders and will not have the voting rights that the holders of shares of our common stock have until the shares of Series J Convertible Preferred Stock are converted into shares of common stock. The limited voting rights of holders of the Series J Convertible Preferred Stock include the right to vote as a single class on certain matters that may affect the preference or special rights of the Series J Convertible Preferred Stock, as described under “Description of the Securities We Are Offering—Description of the Series J Convertible Preferred Stock—Voting Rights”.

Our ability to use net operating losses and other tax attributes to offset future taxable income may be subject to certain limitations.

Under Section 382 of the Internal Revenue Code of 1986, as amended, or the Code, substantial changes in a corporation’s ownership may limit the amount of net operating losses, or NOLs, that can be utilized annually in the future to offset the corporation’s (and the corporation’s affiliates’) U.S. federal and state taxable income. Specifically, this limitation may arise in the event of a cumulative change in ownership of more than 50% within any three-year period. The amount of the annual limitation is determined based on the value of the corporation that underwent the ownership change, immediately before the ownership change. Subsequent ownership changes may further affect any limitation in future years (including by way of exercising of warrants).

Holders may have to pay taxes if we adjust the conversion rate of the Series J Convertible Preferred Stock or make adjustments to the Warrant exercise price or other terms in certain circumstances, even though holders would not receive any cash.

Upon certain adjustments to (or certain failures to make adjustments to) the conversion price of the Series J Convertible Preferred Stock or adjustments to the Warrant exercise price or other terms, holders may be deemed to have received a distribution from us, resulting in taxable income to them for U.S. federal income tax purposes, even though holders would not receive any cash in connection with such adjustment to (or failure to adjust) the conversion price. If you are a non-U.S. holder (as defined in “Material U.S. Federal Income Tax Consequences”) of the Series A Convertible Preferred Stock, any deemed dividend may be subject to U.S. federal withholding tax at a 30% rate, or such lower rate as may be specified by an applicable treaty.

Dividends or other distributions (including deemed distributions) with respect to the Series J Convertible Preferred Stock, or the Warrants, may be subject to withholding taxes in circumstances where we are not obliged to make gross up payments, and this could result in holders receiving less than expected in such circumstances.

On account of certain tax laws that require tax to be withheld from dividends or other distributions (including deemed distributions) on the Series J Convertible Preferred Stock or with respect to the Warrants, we are not required to make gross up payments in respect of such taxes. This would result in holders of Series J Convertible Preferred Stock and the Warrants receiving less than expected and could materially adversely affect the return on your investment.

The Series J Convertible Preferred Stock has not been rated.

We have not sought to obtain a rating for the Series J Convertible Preferred Stock. However, one or more rating agencies may independently determine to issue such a rating or such a rating, if issued, may adversely affect the market price of the Series J Convertible Preferred Stock. In addition, we may elect in the future to obtain a rating for the Series J Convertible Preferred Stock, which could adversely affect the market price of the Series J Convertible Preferred Stock. Ratings only reflect the views of the rating agency or agencies issuing the

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ratings and such ratings could be revised downward, placed on a watch list or withdrawn entirely at the discretion of the issuing rating agency if in its judgment circumstances so warrant. Any such downward revision, placing on a watch list or withdrawal of a rating could have an adverse effect on the market price of the Series J Convertible Preferred Stock.

Purchasers who purchase our securities in this offering pursuant to a securities purchase agreement may have rights not available to purchasers that purchase without the benefit of a securities purchase agreement.

In addition to rights and remedies available to all purchasers in this offering under federal securities and state law, the purchasers that enter into a securities purchase agreement will also be able to bring claims of breach of contract against us. The ability to pursue a claim for breach of contract provides those investors with the means to enforce the covenants uniquely available to them under the securities purchase agreement.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the information incorporated by reference herein contain forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. Any statements about our expectations, beliefs, plans, objectives, assumptions or future events or performance are not historical facts and may be forward-looking. These statements are often, but are not always, made through the use of words or phrases such as “anticipates,” “estimates,” “plans,” “projects,” “continuing,” “ongoing,” “expects,” “management believes,” “we believe,” “we intend” and similar words or phrases. Accordingly, these statements involve estimates, assumptions and uncertainties which could cause actual results to differ materially from those expressed in them. Any forward-looking statements are qualified in their entirety by reference to the factors discussed throughout this prospectus, and in particular those factors included in the section entitled “Risk Factors.”

Because the factors referred to in the preceding paragraph could cause actual results or outcomes to differ materially from those expressed in any forward-looking statements we make, you should not place undue reliance on any such forward-looking statements. Further, any forward-looking statement speaks only as of the date on which it is made, and we undertake no obligation to update any forward-looking statement or statements to reflect events or circumstances after the date on which such statement is made or to reflect the occurrence of unanticipated events. New factors emerge from time to time, and it is not possible for us to predict which factors will arise. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements.

You should carefully read this prospectus and any related free writing prospectus and with the understanding that our actual future results may materially differ from what we expect.

Except as required by law, forward-looking statements speak only as of the date they are made, and we assume no obligation to update any forward-looking statements publicly, or to update the reasons why actual results could differ materially from those anticipated in any forward-looking statements, even if new information becomes available.

USE OF PROCEEDS

We estimate that the net proceeds to us from the sale of Units in this offering will be approximately \$[•] million (calculated based on an assumed public offering price per Unit of \$[•]) after deducting placement agent fees and estimated offering expenses payable by us.

This estimate excludes the proceeds, if any, from the exercise of the Warrants sold in this offering. If all of the Warrants sold in the offering were sold and exercised for cash, we would receive additional net proceeds of approximately \$[•] million. If 50% of the Warrants offered in this offering were sold and exercised for cash, we would receive additional net proceeds of approximately \$[•] million. We cannot predict when or if these Warrants will be exercised. It is possible that these Warrants may expire and may never be exercised.

A \$[•] increase or decrease in the assumed public offering price of \$[•] per Unit would increase or decrease the proceeds from this offering by approximately \$[•], assuming that the number of Units offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated placement agent fees and estimated offering expenses payable by us. Similarly, each increase or decrease of [•] Units offered would increase or decrease our proceeds by approximately \$[•], assuming the assumed public offering price remains the same, and after deducting estimated placement agent fees and estimated offering expenses payable by us and excluding the proceeds, if any, from the conversion of the Series J Convertible Preferred Stock and the exercise of the Warrants issued pursuant to this offering.

Similarly, a [•] Unit increase or decrease in the number of Units offered by us, as set forth on the cover page of this prospectus, would increase or decrease the net proceeds to us by approximately \$[•], assuming the assumed public offering price of \$[•] per Unit remains the same, and after deducting the estimated placement agent fees and estimated offering expenses payable by us, and excluding the proceeds, if any, from the conversion of the Series J Convertible Preferred Stock and the exercise of the Warrants issued pursuant to this offering.

Because this is a best efforts offering and there is no minimum offering amount required as a condition to the closing of this offering, the actual offering amount, the placement agent fees and net proceeds to us are not presently determinable and may be substantially less than the maximum amounts set forth on the cover page of this prospectus.

We currently intend to use the net proceeds from this offering for working capital and general corporate purposes, including for continued investments in our commercialization efforts. We may use a portion of the net proceeds for the acquisitions of businesses, products, technologies or licenses that are complementary to our business, although we have no present commitments or agreements to do so.

The net proceeds of the offering set forth above represents our estimates based upon our current plans and assumptions regarding industry and general economic conditions, our future revenues and expenditures.

The amounts and timing of our actual expenditures may vary significantly and will depend on numerous factors, including market conditions, cash generated or used by our operations, business developments and opportunities that may arise and related rate of growth. We may find it necessary or advisable to use portions of the proceeds from this offering for other purposes.

Circumstances that may give rise to a change in the use of proceeds and the alternate purposes for which the proceeds may be used include:

- the existence of other opportunities or the need to take advantage of changes in timing of our existing activities;
- the need or desire on our part to accelerate, increase or eliminate existing initiatives due to, among other things, changing market conditions and competitive developments; and/or
- if strategic opportunities present themselves (including acquisitions, joint ventures, licensing and other similar transactions).

From time to time, we evaluate these and other factors and we anticipate continuing to make such evaluations to determine if the existing allocation of resources, including the proceeds of this offering, is being optimized.

Pending the application of the net proceeds as described above, we will hold the net proceeds from this offering in short-term, interest-bearing securities.

DIVIDEND POLICY

We have not declared or paid dividends to common stockholders since inception and do not plan to pay cash dividends in the foreseeable future to common stockholders. We currently intend to retain earnings, if any, to finance our growth.

Dividends on the Series J Convertible Preferred Stock will be paid in-kind in additional shares of Series J Convertible Preferred Stock based on the stated value of \$25.00 per share at an assumed dividend rate of [•]% per annum. 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 at the end of [•], [•], [•] and [•] of each year.

CAPITALIZATION

The following table sets forth our actual cash and cash equivalents and our capitalization as of June 30, 2023 and on an adjusted basis to give effect to the sale by us of all [•] Units in this offering at an assumed public offering price of \$[•] per Unit, after deducting the estimated placement agent fees and estimated offering expenses, and assuming no conversion of the Series J Convertible Preferred Stock and no exercise of the Warrants issued in connection with this offering.

You should read this information in conjunction with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and related notes appearing in our [Annual Report on Form 10-K for the year ended December 31, 2022](#), and our condensed consolidated financial statements and related notes appearing in our Quarterly Reports on Form 10-Q for the periods ended [March 31, 2023](#) and [June 30, 2023](#), which are each incorporated by reference in this prospectus. The information below has been adjusted to reflect the effect of this current offering.

The as adjusted information set forth in the table below is illustrative only and will be adjusted based on the actual public offering price and other terms of this offering determined at pricing.

	As of June 30, 2023 (in thousands, except share and per share data)	
	Actual	As Adjusted ⁽¹⁾
Cash and cash equivalents	\$ 8,896	
Stockholders’ equity:		
Series A junior participating preferred stock, par value \$0.0001 per share; authorized 30,000 shares, none outstanding actual and as adjusted	—	
Series F convertible preferred stock, par value \$0.0001 per share; authorized 127 shares, issued and outstanding 127 shares actual and as adjusted	—	
Series J convertible preferred stock, par value \$0.0001 per share; authorized none and [•] shares, actual and as adjusted respectively, issued and outstanding none and [•] shares, actual and as adjusted respectively		
Preferred stock, par value \$0.0001 per share; authorized 39,969,873 shares, none outstanding actual and as adjusted		
Common stock, par value \$0.0001 per share; authorized 100,000,000 shares, issued and outstanding 1,864,265 shares actual and as adjusted	—	
Additional paid-in capital	289,845	
Accumulated other comprehensive income:		
Foreign currency translation adjustment	(24)	
Unrealized gain on marketable securities	—	
Accumulated deficit	(278,747)	
Total stockholders’ equity	11,074	

(1) As adjusted balance does not include Series J Convertible Redeemable Preferred Stock classified as liability or equity due to indeterminate conversion activity to take place upon issuance.

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A \$[•] increase or decrease in the assumed public offering price of \$[•] per Unit would increase or decrease the proceeds from this offering by approximately \$[•], assuming that the number of Units offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated placement agent fees and estimated offering expenses payable by us. Similarly, each increase or decrease of [•] Units offered would increase or decrease our proceeds by approximately \$[•], assuming the assumed public offering price remains the same, and after deducting estimated placement agent fees and estimated offering expenses payable by us and excluding the proceeds, if any, from the conversion of the Series J Convertible Preferred Stock and the exercise of the Warrants issued pursuant to this offering.

The above discussion and table are based 1,864,265 shares of common stock outstanding as of June 30, 2023 and excludes:

- 114,004 shares of our common stock issuable upon the exercise of outstanding stock options, having a weighted average exercise price of \$41.67 per share;
- 1,308,271 shares of our common stock issuable upon the exercise of outstanding warrants (other than the warrants offered hereby) with a weighted-average exercise price of \$35.51 per share;
- 5,080 shares of our common stock issuable upon the conversion of the 127 outstanding shares of our Series F Preferred Stock;
- 46,727 shares of our common stock reserved for future issuance under our equity incentive plans; and
- a warrant issued to DaVita Inc. purchase up to an aggregate of 1,289,081 shares of common stock of the Company.

Except as otherwise noted, all information in this prospectus assumes:

- the conversion of the Series J Convertible Preferred Stock sold in this offering; and
- no exercise of the Warrants issued in connection with this offering.

DILUTION

A purchaser of our securities in this offering will be diluted to the extent of the difference between the price you pay for each share of our common stock and the net tangible book value per share of our common stock after this offering. Our net tangible book value as of June 30, 2023 was approximately \$11,074 million, or \$5.94 per share of our common stock. Net tangible book value per share is equal to our total tangible assets minus total liabilities, all divided by 1,864,265 shares of common stock outstanding at June 30, 2023.

After giving effect to the assumed sale in this offering of [•] shares of common stock, at an assumed public offering price of \$[•] per share, assuming that all shares of Series J Convertible Preferred Stock are converted into shares of common stock, and after deducting placement agent fees and commissions and estimated offering expenses payable by us, our net tangible book value as of June 30, 2023 would have been approximately \$[•] million, or \$[•] per share of our common stock. This amount represents an immediate increase of net tangible book value to our existing stockholders of \$[•] per share and an immediate dilution of \$[•] per share to purchasers of common stock in this offering. Dilution per share to purchasers of common stock in this offering is determined by subtracting pro forma net tangible book value per share after this offering from the public offering price per share paid by a purchaser in this offering. The following table illustrates this per share dilution:

Assumed public offering price share of common stock	\$ [•]
Historical net tangible book value per share at June 30, 2023	\$5.94
[Increase][Decrease] per share attributable to existing stockholders	\$ [•]
Net tangible book value per share, as adjusted to give effect to this offering	\$ [•]
Dilution per share to purchasers of common stock in this offering	\$ [•]

A \$[•] increase or decrease in the assumed public offering price of \$[•] per Unit, based on the last reported sale price for our common stock as reported on the Nasdaq Capital Market on September [•], 2023, would decrease the number of shares of common stock offered in this offering by approximately [•] million shares or increase the number of shares of our common stock offered in this offering by approximately [•] million shares, respectively.

We may also increase or decrease the number of Units we are offering. An increase of [•] in the number of Units offered by us would increase our as adjusted net tangible book value by approximately \$[•] million, or \$[•] per share, and decrease the dilution per share to investors participating in this offering by \$[•] per share, assuming the assumed offering price per Unit remains the same and after deducting the estimated placement agent commissions and estimated offering expenses payable by us. Similarly, a decrease of [•] in the number of Units offered by us would decrease our as adjusted net tangible book value by approximately \$[•] million or \$[•] per Units, and increase the dilution per share to investors participating in this offering by \$[•] per share, assuming the assumed offering price per Units remains the same and after deducting the estimated placement agent commissions and estimated offering expenses payable by us. The information discussed above is illustrative only and will adjust based on the actual offering price, the actual number of Units we offer in this offering, and other terms of this offering determined at pricing.

The above discussion and table are based on 1,864,265 shares of common stock outstanding as of June 30, 2023 excludes the following as of that date:

- 114,004 shares of common stock issuable upon the exercise of outstanding stock options, having a weighted average exercise price of \$41.67 per share;
- 1,308,271 shares of our common stock issuable upon the exercise of outstanding warrants (other than the warrants offered hereby) with a weighted-average exercise price of \$35.51 per share;
- 5,080 shares of common stock issuable upon the conversion of the 127 outstanding shares of our Series F Preferred Stock;
- 46,727 shares of our common stock reserved for future issuance under our equity incentive plans;
- [•] shares of common stock underlying the Series J Convertible Preferred Stock; and
- [•] shares of common stock underlying the warrants.

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To the extent that outstanding convertible preferred stock, options or warrants are converted or exercised, you could experience further dilution. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of additional equity, the issuance of these shares could result in further dilution to our stockholders.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth information regarding the beneficial ownership (as defined in Rule 13d-3 of the Exchange Act) of our common stock as of September 8, 2023 by (i) each of the directors and named executive officers, (ii) all of the directors and executive officers as a group, and (iii) to our knowledge, beneficial owners of more than 5% of our common stock. As of September 8, 2023, there were 1,864,265 shares of our common stock outstanding. Unless otherwise indicated and subject to applicable community property laws, each owner has sole voting and investment powers with respect to the securities listed below.

Name of Beneficial Owner	Number of Shares	Right to Acquire ⁽¹⁾	Total	Aggregate Percent of Class ⁽²⁾
John L. Erb	4	5,146 ⁽³⁾	5,150	*
Michael McCormick	—	820	820	*
Maria Rosa Costanzo, M.D.	—	—	—	—
Jon W. Salveson	—	1,157	1,157	*
Gregory D. Waller	—	1,157	1,157	*
Robert B. Scott	—	65	65	*
Nestor Jaramillo, Jr.	4,098	1,490	5,588	*
Neil P. Ayotte	—	351	351	*
Lynn Blake	100	0	100	*
All current directors and executive officers as a group (8 persons)	4,102	10,186	14,288	*%

* Less than one percent.

- (1) Except as otherwise described below, amounts reflect the number of shares that such holder could acquire through (i) the exercise of outstanding stock options, (ii) the vesting/settlement of outstanding RSUs, (iii) the exercise of outstanding warrants to purchase common stock, and (iv) the conversion of outstanding Series F Preferred Stock, in each case within 60 days after September 8, 2023.
- (2) Based on 1,864,265 shares outstanding as of September 8, 2023.
- (3) Consists of (i) 1,140 shares issuable upon the exercise of outstanding stock options, (ii) 6 shares issuable upon the exercise of outstanding warrants to purchase common stock and (iii) 4,000 shares issuable upon conversion of outstanding shares of Series F Convertible Preferred Stock (assuming all 100 shares of Series F Convertible Preferred Stock held by Mr. Erb are converted at once and rounded up to the nearest whole share).

DESCRIPTION OF SECURITIES BEING OFFERED

Description of Units

We are offering on a best-efforts basis up to [•] Units in this offering at the assumed public offering price of \$[•] per Unit. Each Unit includes one share of our Series J Convertible Preferred Stock and one Warrant to purchase one-half of one (0.5) share of our Series J Convertible Preferred Stock at an exercise price equal to \$[•] per one-half of one share of Series J Convertible Preferred Stock, which is [•]% of the public offering price of the Units. Our Units will not be certificated and the shares of our Series J Convertible Preferred Stock and Warrants consisting of such Units are immediately separable and will be issued separately in this offering. We are also registering the shares of Series J Convertible Preferred Stock issuable as PIK dividends, the shares of Series J Convertible Preferred Stock issuable upon exercise of the Warrants and the shares of common stock issuable upon conversion of the Series J Convertible Preferred Stock. These securities are being issued pursuant to a securities purchase agreement between us and the purchasers. You should review the securities purchase agreement, the form of Certificate of Designations establishing the Series J Convertible Preferred Stock, the form of Warrant, the Warrant Agency Agreement, and the placement agency agreement between us and the placement agents, each of which are filed, or will be filed, as exhibits to the registration statement of which this prospectus is a part, for a complete description of the terms and conditions applicable to the Units, the Series J Convertible Preferred Stock and the Warrants.

Series J Convertible Preferred Stock Being Offered Pursuant to this Prospectus

The following describes the material terms of the Series J Convertible Preferred Stock. This is not a complete description and is subject to, and entirely qualified by reference to applicable provisions of our Certificate of Incorporation, Bylaws and the Certificate of Designations establishing the Series J Convertible Preferred Stock, which are filed with the SEC as exhibits to the registration statement of which this prospectus is a part, as well as the relevant portions of Delaware law. Capitalized terms used but not defined in this subsection shall have the meanings ascribed to them in the Certificate of Designations establishing the Series J Convertible Preferred Stock.

Pursuant to our Certificate of Incorporation, we are authorized to issue 40,000,000 shares of our preferred stock, par value \$0.0001 per share. As of the date of this prospectus, there are 30,000 shares designated as Series A Preferred Stock, of which no shares are issued and outstanding, and 127 shares designated as Series F Convertible Preferred Stock, of which 127 shares are issued and outstanding. In connection with this offering, our board of directors will designate approximately [•] of these shares of preferred stock as the “Series J Convertible Redeemable Preferred Stock”, pursuant to a Certificate of Designation of Preferences, Rights and Limitations (the “Certificate of Designations”) that sets forth the terms of such Series J Convertible Preferred Stock, with a liquidation preference of \$25.00 per share, which final number of designated shares will be based on the actual number of Series J Convertible Preferred Stock issued in connection with this offering.

In addition, subject to the limitations described herein, we may issue additional preferred stock from time to time in one or more series, each with such designation, powers, preferences and relative, participating, optional or other special rights, and the qualifications, limitations or restrictions applicable to any of those rights, including dividend rights, voting rights, conversion or exchange rights, terms of redemption and liquidation preferences, as the Board (or a duly authorized committee of the Board) may determine prior to the time of such issuance.

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

Transfer Agent and Registrar. The transfer agent and registrar for the Series J Convertible Preferred Stock will be Equiniti Trust Company, LLC (the “Transfer Agent”). The Transfer Agent’s address is 6201 15th Avenue, Brooklyn, NY, 11219. The Series J Convertible Preferred Stock will be issued and maintained in book-entry form registered in the name of the nominee, The Depository Trust Company. See “—Book—Entry Procedures” below.

Maturity. The Series J Convertible Preferred Stock matures three (3) years from the Closing Date.

Ranking and Liquidation Preference. Upon any liquidation, dissolution or winding-up of the Company, whether voluntary or involuntary, prior and in preference to the common stock, holders of the Series J

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Convertible Preferred Stock shall be entitled to receive out of the assets available for distribution to stockholders an amount equal in cash to 100% of the aggregate Stated Value of \$25.00 per share (the “Stated Value”) of all shares of Series J Convertible Preferred Stock held by such holder, and any other fees then due and owing thereon under the Certificate of Designations, and no more, and if the assets of the Company shall be insufficient to pay in full such amounts, then the entire assets to be distributed to the holders shall be ratably distributed among the holders in accordance with the respective amounts that would be payable on such shares if all amounts payable thereon were paid in full.

Dividends. The Certificate of Designations shall provide that dividends on the Series J Convertible Preferred Stock shall be paid in-kind in additional shares of Series J Convertible Preferred Stock based on the stated value of \$25.00 per share at an assumed annual dividend rate of [•]% and a quarterly dividend rate of [•]% (the “Quarterly Dividend Rate”). 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 of record at the close of business at the end of [•], [•], [•] and [•] of each year (each a “Dividend Record Date”) at the Quarterly Dividend Rate. PIK dividends on each share of Series J Convertible Preferred Stock shall be paid three business days after each Dividend Record Date in additional fully paid and nonassessable, registered shares of Series J Convertible Preferred Stock in a number equal to the quotient obtained by dividing (A) the product obtained by multiplying (i) the Quarterly Dividend Rate and (ii) the stated value of \$25.00 per share, by (B) the public offering price per Unit (equal to \$[•], based on the assumed public offering price set forth on the cover page of the prospectus).

Conversion. The Series J Convertible Preferred Stock is convertible at any time at the option of the holder. Except as provided below, the Series J Convertible Preferred Stock is not convertible into or exchangeable for any other securities or property.

Conversion at Option of Holder. Each share of Series J Convertible Preferred Stock is convertible at the option of the holder at any time into shares of our common stock at the Conversion Price (\$[•] based on the closing price of our common stock on the Nasdaq Capital Market on [•], 2023) which Conversion Price is subject to adjustment. The Conversion Price will equal the closing price of our common stock on the Nasdaq Capital market on the date on which the registration statement of which this prospectus forms a part is declared effective by the SEC. The Conversion Price is subject to adjustment for: (i) the payment of stock dividends or other distributions payable in common stock on the outstanding shares of our common stock, excluding the shares of common stock issuable upon the conversion of the Series J Convertible Preferred Stock; and (ii) subdivisions and combinations (including by way of a reverse stock split).

Holders shall effect conversions of the Series J Convertible Preferred Stock by providing us a conversion notice (a “Notice of Conversion”), duly completed and executed. The Notice of Conversion must specify the number of shares of Series J Convertible Preferred Stock then held by the holder and the number of such shares which the holder is converting. To effect conversions of shares of Series J Convertible Preferred Stock, a holder shall not be required to surrender the certificate(s), if any, representing the shares of Series J Convertible Preferred Stock to us unless all of the shares of Series J Convertible Preferred Stock represented thereby are so converted, in which case such holder shall deliver the certificate representing such shares of Series J Convertible Preferred Stock promptly following the conversion date at issue. Shares of Series J Convertible Preferred Stock converted into our shares of common stock shall be canceled and shall not be reissued.

If, at any time while the Series J Convertible Preferred Stock is outstanding: we (A) pay a stock dividend or otherwise make a distribution or distributions payable in shares of our common stock or any other Common Stock Equivalents (which, for avoidance of doubt, shall not include any shares of common stock issued by us upon conversion of the Series J Convertible Preferred Stock, or payment of a dividend on the Series J Convertible Preferred Stock) with respect to the then outstanding shares of common stock; (B) subdivide outstanding shares of common stock into a larger number of shares; (C) combine (including by way of a reverse stock split) outstanding shares of common stock into a smaller number of shares or (D) issue, in the event of a reclassification of shares of the common stock, any shares of our capital stock, which we refer to collectively as the “Anti-Dilution Provisions”, then the Conversion Price shall be multiplied by a fraction of which the numerator shall be the number of shares of common stock (excluding any treasury shares) outstanding immediately before such event and of which the denominator shall be the number of shares of common stock outstanding immediately after such event (excluding any treasury shares). Any adjustment made as a result of the Anti-Dilution Provisions shall become effective immediately after the record date for the determination of shareholders entitled to receive such dividend or distribution and shall become effective immediately after the

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effective date in the case of a subdivision or combination. All calculations will be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of the Anti-Dilution Provisions, the number of shares of common stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of common stock (excluding any treasury shares) issued and outstanding.

Whenever the Conversion Price is adjusted pursuant to any Anti-Dilution Provision, we will promptly deliver to each holder of Series J Convertible Preferred Stock a notice setting forth the Conversion Price after such adjustment and setting forth a brief statement of the facts requiring such adjustment. Notwithstanding the foregoing in no event may the Conversion Price be less than the par value per share of Series J Convertible Preferred Stock.

Obligations Absolute. Subject to holder's right to rescind a notice of conversion, our obligation to issue and deliver the shares of common stock upon conversion of Series J Convertible Preferred Stock in accordance with its terms are absolute and unconditional, irrespective of any action or inaction by a holder to enforce the same, any waiver or consent with respect to any provision hereof, the recovery of any judgment against any Person or any action to enforce the same, or any setoff, counterclaim, recoupment, limitation or termination, or any breach or alleged breach by such holder or any other Person of any obligation to us or any violation or alleged violation of law by such holder or any other Person, and irrespective of any other circumstance which might otherwise limit our obligation to such holder in connection with the issuance of such shares of common stock. If we fail to deliver to a holder shares of common stock upon conversion by the Share Delivery Date applicable to such conversion, we shall pay to such holder, in cash, as liquidated damages and not as a penalty, for each \$[•] of Stated Value of Series J Convertible Preferred Stock being converted, \$[•] per Trading Day (increasing to \$[•] per Trading Day on the third Trading Day after the Share Delivery Date and increasing to \$[•] per Trading Day on the sixth Trading Day after the Share Delivery Date) for each Trading Day after the Share Delivery Date until such Conversion Shares are delivered or Holder rescinds such conversion.

Buy-In on Failure to Timely Deliver Certificates Upon Conversion. If we fail to deliver to a holder the applicable certificate or certificates or to effect a delivery via DWAC, as applicable, by the Share Delivery Date (other than a failure caused by incorrect or incomplete information provided by the holder to us), and if after such Share Delivery Date the holder is required by its brokerage firm to purchase (in an open market transaction or otherwise), or the holder's brokerage firm otherwise purchases, shares of common stock to deliver in satisfaction of a sale by such holder of the Conversion Shares which the holder was entitled to receive upon the conversion relating to such Share Delivery Date (a "Buy-In"), then we are obligated to (A) pay in cash to the holder (in addition to any other remedies available to or elected by the holder) the amount by which (x) the holder's total purchase price (including any brokerage commissions) for the shares of common stock so purchased exceeds (y) the product of (1) the aggregate number of shares of common stock that such holder was entitled to receive from the conversion at issue multiplied by (2) the actual sale price at which the sell order giving rise to such purchase obligation was executed (including any brokerage commissions) and (B) at the option of the holder, either reissue (if surrendered) the shares of Series J Convertible Preferred Stock equal to the number of shares of Series J Convertible Preferred Stock submitted for conversion or deliver to the holder the number of shares of common stock that would have been issued if we had timely complied with our delivery requirements. For example, if a holder purchases shares of common stock having a total purchase price of \$11,000 to cover a Buy-In with respect to an attempted conversion of shares of Series J Convertible Preferred Stock with respect to which the actual sale price (including any brokerage commissions) giving rise to such purchase obligation was a total of \$10,000 under clause (A) of the immediately preceding sentence, we would be required to pay such holder \$1,000. The holder shall provide us written notice, within three Trading Days after the occurrence of a Buy-In, indicating the amounts payable to such holder in respect of such Buy-In together with applicable confirmations and other evidence reasonably requested by us. Nothing herein shall limit a holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect our failure to timely deliver certificates representing shares of common stock upon conversion of the shares of Series J Convertible Preferred Stock as required pursuant to the terms hereof; provided, however, that the holder shall not be entitled to both (i) require the reissuance of the shares of Series J Convertible Preferred Stock submitted for conversion for which such conversion was not timely honored and (ii) receive the number of shares of common stock that would have been issued if we had timely complied with applicable delivery requirements.

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Reservation of Shares Issuable Upon Conversion. We have agreed that we will at all times reserve and keep available out of our authorized and unissued shares of common stock for the sole purpose of issuance upon conversion of the Series J Convertible Preferred Stock, free from preemptive rights or any other actual contingent purchase rights of Persons other than the holders of the Series J Convertible Preferred Stock, not less than such aggregate number of shares of the common stock as shall be issuable upon the conversion of all outstanding shares of Series J Convertible Preferred Stock. We have further agreed that all shares of common stock that shall be so issuable shall, upon issue, be duly authorized, validly issued, fully paid, nonassessable and free and clear of all liens and other encumbrances.

Beneficial Ownership Limitation. Notwithstanding anything herein to the contrary, we shall not effect any conversion of the Series J Convertible Preferred Stock, and a Holder shall not have the right to convert any portion of the Series J Convertible Preferred Stock, to the extent that, after giving effect to the conversion set forth on the applicable Notice of Conversion, such Holder (together with such Holder's Affiliates, and any Persons acting as a group together with such Holder or any of such Holder's Affiliates (such Persons, "Attribution Parties")) would beneficially own in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of shares of common stock beneficially owned by such Holder and its Affiliates and Attribution Parties shall include the number of shares of common stock issuable upon conversion of the Series J Convertible Preferred Stock with respect to which such determination is being made, but shall exclude the number of shares of common stock which are issuable upon (i) conversion of the remaining, unconverted Series J Convertible Preferred Stock beneficially owned by such Holder or any of its Affiliates or Attribution Parties and (ii) exercise or conversion of the unexercised or unconverted portion of any other of our securities subject to a limitation on conversion or exercise analogous to the limitation contained herein (including, without limitation, the Series J Convertible Preferred Stock) beneficially owned by such Holder or any of its Affiliates or Attribution Parties. Except as set forth in the preceding sentence, for purposes of this section, beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. To the extent that the limitation contained in this section applies, the determination of whether the Series J Convertible Preferred Stock is convertible (in relation to other securities owned by such Holder together with any Affiliates and Attribution Parties) and of how many shares of Series J Convertible Preferred Stock are convertible shall be in the sole discretion of such Holder, and the submission of a Notice of Conversion shall be deemed to be such Holder's determination of whether the shares of Series J Convertible Preferred Stock may be converted (in relation to other securities owned by such Holder together with any Affiliates and Attribution Parties) and how many shares of the Series J Convertible Preferred Stock are convertible, in each case subject to the Beneficial Ownership Limitation. To ensure compliance with this restriction, each Holder will be deemed to represent to us each time it delivers a Notice of Conversion that such Notice of Conversion has not violated the restrictions set forth in this section and we shall have no obligation to verify or confirm the accuracy of such determination. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this section, in determining the number of outstanding shares of common stock, a Holder may rely on the number of outstanding shares of common stock as stated in the most recent of the following: (i) our most recent periodic or annual report filed with the Commission, as the case may be, (ii) a more recent public announcement by us or (iii) a more recent written notice by us or the Transfer Agent setting forth the number of shares of common stock outstanding. Upon the written or oral request (which may be via email) of a Holder, we within one (1) Trading Day confirm orally and in writing to such Holder the number of shares of common stock then outstanding. In any case, the number of outstanding shares of common stock shall be determined after giving effect to the conversion or exercise of our securities, including the Series J Convertible Preferred Stock, by such Holder or its Affiliates or Attribution Parties since the date as of which such number of outstanding shares of common stock was reported. The "Beneficial Ownership Limitation" shall be 4.99% (or, upon election by a Holder prior to the issuance of any shares of Series J Convertible Preferred Stock, 9.99%) of the number of shares of the common stock outstanding immediately after giving effect to the issuance of shares of common stock issuable upon conversion of Series J Convertible Preferred Stock held by the applicable Holder. A Holder, upon notice to us, may increase or decrease the Beneficial Ownership Limitation provisions of this section applicable to its Series J Convertible Preferred Stock; provided, that the Beneficial Ownership Limitation shall not in any event exceed 9.99% of the number of shares of the common stock outstanding immediately after giving effect to the issuance of shares of common stock upon conversion of this Series J Convertible Preferred Stock held by the Holder and the provisions of this section shall continue to apply. Any such increase will not be effective until the 61st day after such notice is

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delivered to us and shall only apply to such Holder and no other Holder. The Beneficial Ownership Limitation shall not be waived by us or the Holder and upon issuance of the Series J Convertible Preferred Stock by us, and the purchase thereof by the Holder, each of us and the Holder shall be deemed to acknowledge such limitation and to agree not to waive it. The provisions of this section shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this section to correct this section (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation contained herein or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitations contained in this subsection shall apply to a successor holder of Series J Convertible Preferred Stock.

Subsequent Rights Offerings. In addition to any anti-dilution adjustments described above, if at any time we grant, issue or sell any Common Stock Equivalents or rights to purchase stock, warrants, securities or other property pro rata to the record holders of common stock or any class thereof (the "Purchase Rights"), then the Holder will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of shares of common stock acquirable upon complete conversion of such Holder's Series J Convertible Preferred Stock (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of shares of common stock are to be determined for the grant, issue or sale of such Purchase Rights (provided, however, that, to the extent that the Holder's right to participate in any such Purchase Right would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Purchase Right to such extent (or beneficial ownership of such shares of common stock as a result of such Purchase Right to such extent) and such Purchase Right to such extent shall be held in abeyance for the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

Pro Rata Distributions. During such time as the Series J Convertible Preferred Stock is outstanding, if we declare or make any dividend or other distribution of our assets (or rights to acquire its assets) to holders of common stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property or options by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) (a "Distribution"), then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of common stock acquirable upon complete conversion of the Series J Convertible Preferred Stock (without regard to any limitations on conversion hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date of which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of our common stock are to be determined for the participation in such Distribution (provided, however, that, to the extent that the Holder's right to participate in any such Distribution would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Distribution to such extent (or in the beneficial ownership of any shares of common stock as a result of such Distribution to such extent) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

Fundamental Transactions. In the event of a Fundamental Transaction and generally including any reorganization, recapitalization or reclassification of our common stock, the sale, transfer or other disposition of all or substantially all of our properties or assets, our consolidation or merger with or into another person, or the acquisition of more than 50% of our outstanding common stock, the holders of the Series J Convertible Preferred Stock will be entitled to receive upon conversion of the Series J Convertible Preferred Stock the kind and amount of securities, cash or other property that the holders would have received had they converted the Series J Convertible Preferred Stock immediately prior to such Fundamental Transaction (without regard to the Beneficial Ownership Limitation).

Mandatory Redemption. If any shares of Series J Convertible Preferred Stock are outstanding at the end of the three (3) year term, then we shall 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 third-year anniversary of the Closing Date at a price per Series J Convertible Preferred Share equal to the sum of (x) 100% of the Stated Value plus (y) all other amounts due in respect of the Series J Convertible Preferred Stock (if any). If on the Mandatory Redemption Date, Delaware law governing distributions to

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stockholders prevents the Company from redeeming all shares of Series J Preferred Stock to be redeemed, then the Corporation shall, provided there is no prohibition under Delaware law, redeem the Series J Convertible Preferred Stock by paying to the Holder the unpaid cash redemption payment in duly authorized, validly issued, fully paid and non-assessable shares of Common Stock equal in number to the quotient obtained by dividing such unpaid amount by the closing price of the Common Stock on the Trading Market on the Mandatory Redemption Date.

Limited Voting Rights. Holders of the Series J Convertible Preferred Stock will not have any voting rights, except as described below or as otherwise required by law.

In any matter in which the Series J Convertible Preferred Stock may vote (as expressly provided herein or as may be required by law), each share of Series J Convertible Preferred Stock will be entitled to one vote per share. So long as any shares of Series J Convertible Preferred Stock remain outstanding, the Company will not, without the consent or the affirmative vote of a majority of the outstanding shares of Series J Convertible Preferred Stock, given in person or by proxy, either in writing without a meeting or by vote at any meeting called for the purpose: (i) alter or change adversely the powers, preferences or rights given to the Series J Convertible Preferred Stock or alter or amend adversely the Certificate of Designations; (ii) increase the number of authorized shares of Series J Convertible Preferred Stock; or (iii) enter into any agreement with respect to any of the foregoing.

The rules and procedures for calling and conducting any meeting of the holders of the Series J Convertible Preferred Stock (including, without limitation, the fixing of a record date in connection therewith), the solicitation and use of proxies at such a meeting, the obtaining of written consents and any other aspect or matter with regard to such a meeting or such consents shall be governed by any rules the Board of Director (or a duly authorized committee of the Board of Directors), in its discretion, may adopt from time to time, which rules and procedures shall conform to the requirements of the Certificate of Incorporation, Bylaws, applicable law and any national securities exchange or other trading facility on which the Series J Convertible Preferred Stock may be listed or traded at the time.

Holders of the Series J Convertible Preferred Stock will not have any voting rights with respect to, and the consent of the holders of the Series J Convertible Preferred Stock is not required for, the taking of any corporate action, including any merger or consolidation involving the Company or a sale of all or substantially all of the Company's assets, regardless of the effect that such merger, consolidation or sale may have upon the powers, preferences, voting power or other rights or privileges of the Series J Convertible Preferred Stock, except as described above.

No Preemptive Rights. No holders of the Series J Convertible Preferred Stock will, as holders of Series J Convertible Preferred Stock, have any preemptive rights to purchase or subscribe for the common stock or any other security.

Exclusion of Other Rights. The shares of the Series J Convertible Preferred Stock do not have any voting powers, preferences or relative, participating, optional or other special rights, or qualifications, limitations or restrictions thereof, other than as set forth in the Certificate of Designations or in our Certificate of Incorporation.

Registration; Transfer. Pursuant to the terms of the Certificate of Designations, the Company is obligated to maintain an effective registration statement covering: (a) the issuance of shares of common stock issuable upon conversion of the Series J Convertible Preferred Stock and (b) the issuance of additional shares of Series J Convertible Preferred Stock pursuant to our obligation to pay PIK dividends, in each case, until such time as no Series J Convertible Preferred Stock (and no Warrants exercisable for shares of Series J Convertible Preferred Stock) remain outstanding, unless there is available an exemption from, or a transaction not subject to, the registration requirements of the Securities Act that covers the issuance of the Series J Convertible Preferred Stock and the shares of common stock issuable upon conversion of such shares of Series J Convertible Preferred Stock.

Book-Entry Procedures. DTC will act as securities depository for the Series J Convertible Preferred Stock offered hereunder. With respect to the Series J Convertible Preferred Stock offered hereunder, we will issue one or more fully registered global securities certificates in the name of DTC or DTC's nominee. These certificates will represent the total aggregate number of shares of Series J Convertible Preferred Stock. We will deposit these certificates with DTC or a custodian appointed by DTC. We will not issue certificates to you for the shares of Series J Convertible Preferred Stock that you purchase, unless DTC's services are discontinued as described below.

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Title to book-entry interests in the Series J Convertible Preferred Stock will pass by book-entry registration of the transfer within the records of DTC in accordance with its procedures. Book-entry interests in the securities may be transferred within DTC in accordance with procedures established for these purposes by DTC. Each person owning a beneficial interest in shares of the Series J Convertible Preferred Stock must rely on the procedures of DTC and the participant through which such person owns its interest to exercise its rights as a holder of the Series J Convertible Preferred Stock. DTC has advised us that it is a limited-purpose trust company organized under the New York Banking Law, a member of the Federal Reserve System, a “clearing corporation” within the meaning of the New York Uniform Commercial Code and a “clearing agency” registered under the provisions of Section 17A of the Exchange Act. DTC holds securities that its participants (“Direct Participants”) deposit with DTC. DTC also facilitates the settlement among Direct Participants of securities transactions, such as transfers and pledges in deposited securities through electronic computerized book-entry changes in Direct Participants’ accounts, thereby eliminating the need for physical movement of securities certificates. Direct Participants include securities brokers and dealers, banks, trust companies, clearing corporations, and certain other organizations. Access to the DTC system is also available to others such as securities brokers and dealers, including the Placement Agent, banks and trust companies that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly (“Indirect Participants”). The rules applicable to DTC and its Direct and Indirect Participants are on file with the SEC.

When you purchase shares of Series J Convertible Preferred Stock within the DTC system, the purchase must be by or through a Direct Participant. The Direct Participant will receive a credit for the Series J Convertible Preferred Stock on DTC’s records. You will be considered to be the “beneficial owner” of the Series J Convertible Preferred Stock. Your beneficial ownership interest will be recorded on the Direct Participants and Indirect Participants’ records, but DTC will have no knowledge of your individual ownership. DTC’s records reflect only the identity of the Direct Participants to whose accounts shares of Series J Convertible Preferred Stock are credited.

You will not receive written confirmation from DTC of your purchase. The Direct Participants or Indirect Participants through whom you purchased the Series J Convertible Preferred Stock should send you written confirmations providing details of your transactions, as well as periodic statements of your holdings. The Direct Participants and Indirect Participants are responsible for keeping an accurate account of the holdings of their customers like you.

Transfers of ownership interests held through Direct Participants and Indirect Participants will be accomplished by entries on the books of Direct Participants and Indirect Participants acting on behalf of the beneficial owners.

The laws of some states may require that specified purchasers of securities take physical delivery of shares of Series J Convertible Preferred Stock in definitive form. These laws may impair the ability to transfer beneficial interests in the global certificates representing the Series J Convertible Preferred Stock.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to beneficial owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time.

We understand that, under DTC’s existing practices, in the event that we request any action of the holders, or an owner of a beneficial interest in a global security, such as you, desires to take any action that a holder is entitled to take under our Certificate of Incorporation (including the Certificate of Designations designating the Series J Convertible Preferred Stock), DTC would authorize the Direct Participants holding the relevant shares to take such action, and those Direct Participants and any Indirect Participants would authorize beneficial owners owning through those Direct Participants and Indirect Participants to take such action or would otherwise act upon the instructions of beneficial owners owning through them.

Any redemption notices with respect to the Series J Convertible Preferred Stock will be sent to DTC or its nominee. If less than all of the outstanding shares of Series J Convertible Preferred Stock are being redeemed, DTC will reduce each Direct Participant’s holdings of shares of Series J Convertible Preferred Stock in accordance with its procedures.

In those instances where a vote is required, neither DTC nor its nominee will consent or vote with respect to the shares of Series J Convertible Preferred Stock. Under its usual procedures, DTC would mail an omnibus

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proxy to us as soon as possible after the record date. The omnibus proxy assigns DTC's or its nominee's consenting or voting rights to those Direct Participants whose accounts the shares of Series J Convertible Preferred Stock are credited to on the record date, which are identified in a listing attached to the omnibus proxy.

Dividends on the Series J Convertible Preferred Stock are made directly to DTC (or its successor, if applicable). DTC's practice is to credit participants' accounts on the relevant payment date in accordance with their respective holdings shown on DTC's records unless DTC has reason to believe that it will not receive payment on that payment date.

Payments by Direct Participants and Indirect Participants to beneficial owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name." These payments will be the responsibility of the participant and not of DTC, us or any agent of ours. DTC may discontinue providing its services as securities depository with respect to the Series J Convertible Preferred Stock at any time by giving reasonable notice to us. Additionally, we may decide to discontinue the book-entry only system of transfers with respect to the Series J Convertible Preferred Stock. In that event, we will print and deliver certificates in fully registered form for the Series J Convertible Preferred Stock. If DTC notifies us that it is unwilling to continue as securities depository, or it is unable to continue or ceases to be a clearing agency registered under the Exchange Act and a successor depository is not appointed by us within 90 days after receiving such notice or becoming aware that DTC is no longer so registered, we will issue the Series J Convertible Preferred Stock in definitive form, at our expense, upon registration of transfer of, or in exchange for, such global security.

According to DTC, the foregoing information with respect to DTC has been provided to the financial community for informational purposes only and is not intended to serve as a representation, warranty or contract modification of any kind.

Global Clearance and Settlement Procedures. Initial settlement for the Series J Convertible Preferred Stock will be made in immediately available funds. Secondary market trading among DTC's participants occurs in the ordinary way in accordance with DTC's rules and will be settled in immediately available funds using DTC's Same-Day Funds Settlement System.

Direct Registration System. The Series J Convertible Preferred Stock will be registered in book-entry form through the Direct Registration System (the "DRS"). The DRS is a system administered by DTC pursuant to which the depository may register the ownership of uncertificated shares, which ownership shall be evidenced by periodic statements issued by the depository to the holders of shares of Series J Convertible Preferred Stock entitled thereto. This direct registration form of ownership allows investors to have securities registered in their names without requiring the issuance of a physical stock certificate, eliminates the need for you to safeguard and store certificates and permits the electronic transfer of securities to effect transactions without transferring physical certificates.

Common Stock

The material terms of our common stock are described under the caption "Description of Capital Stock" in this prospectus.

Description of Warrants Included in the Units

The following summary of certain terms and provisions of the Warrants offered hereby is not complete and is subject to, and qualified in its entirety by, the provisions of the form of Warrant Agency Agreement between us and the Warrant Agent, and the form of Warrant, both of which are filed as exhibits to the registration statement of which this prospectus forms a part. Prospective investors should carefully review the terms and provisions set forth in form of Warrant Agency Agreement, including the annexes thereto, and the form of Warrant. Capitalized terms used but not defined in this subsection shall have the meanings ascribed to them in the Warrants.

Exercisability. The Warrants are exercisable at any time after their original issuance and at any time up to the date that is three years after the Closing Date. The Warrants will be exercisable, at the option of each holder, in whole or in part by delivering to us a duly executed exercise notice and, by payment in full in immediately available funds for the number of shares of Series J Convertible Preferred Stock purchased upon such exercise. The Warrants will not include a cashless exercise feature. No fractional shares will be issued in connection with the exercise of a Warrant. In lieu of fractional shares, we will pay the holder an amount in cash equal to the

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fractional amount multiplied by the Stated Value of the Series J Convertible Preferred Stock. Accordingly, a holder of the Warrants is entitled to exercise a number of Warrants that would solely result in the holder receiving one or more whole shares of Series J Convertible Preferred Stock. If we fail to deliver to a holder the applicable certificate or certificates or to effect a delivery via DWAC, as applicable, (other than certain specified failures) and the holder is required by its brokerage firm to purchase (in an open market transaction or otherwise), or the holder's brokerage firm otherwise purchases, shares of common stock to deliver in satisfaction of a sale by such holder of the Series J Convertible Preferred Stock which the holder anticipated receiving upon such exercise, then we shall (A) pay in cash to the holder the amount, if any, by which (x) the holder's total purchase price (including brokerage commissions, if any) for the shares of Series J Convertible Preferred Stock so purchased exceeds (y) the amount obtained by multiplying (1) the number of shares of Series J Convertible Preferred Stock that we were required to deliver to the holder in connection with the exercise at issue times (2) the price at which the sell order giving rise to such purchase obligation was executed, and (B) at the option of the holder, either reinstate the portion of the Warrant and equivalent number of shares of Series J Convertible Preferred Stock for which such exercise was not honored (in which case such exercise shall be deemed rescinded) or deliver to the holder the number of shares of Series J Convertible Preferred Stock that would have been issued had we timely complied with its exercise and delivery obligations hereunder.

Exercise Limitation. A holder will not have the right to exercise any portion of the Warrant if the holder (together with its affiliates) would beneficially own in excess of 4.99% of the number of shares of our common stock outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the Warrants. However, any holder may increase or decrease such percentage to any other percentage not in excess of 9.99%, provided that any increase in such percentage shall not be effective until 61 days following notice from the holder to us.

Exercise Price. The exercise price per Warrant is \$[•] to purchase one-half (0.5) of one shares of our Series J Convertible Preferred Stock, which is [•]% of the public offering price per Unit. The exercise price is subject to appropriate adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting our common stock and also upon any distributions of assets, including cash, stock or other property to our stockholders.

Adjustments. If, at any time while the Warrants are outstanding: we (A) pay a stock dividend or otherwise make a distribution or distributions payable in shares of our Series J Convertible Preferred Stock (which, for avoidance of doubt, shall not include any shares of Series J Convertible Preferred Stock issued by us upon exercise of the Warrants and shall not include any of the PIK dividends to be paid to holders of shares of Series J Convertible Preferred Stock); (B) subdivide outstanding shares of Series J Convertible Preferred Stock into a larger number of shares; (C) combine (including by way of a reverse stock split) outstanding shares of Series J Convertible Preferred Stock into a smaller number of shares or (D) issue, in the event of a reclassification of shares of the Series J Convertible Preferred Stock, any shares of our capital stock, which we refer to collectively as the "Anti-Dilution Provisions", then the number of shares issuable upon exercise of the Warrants shall be proportionately adjusted such that the aggregate Exercise Price of the Warrants shall remain unchanged.

Subsequent Rights Offerings. In addition to any adjustments pursuant to the paragraph above, if at any time that a Warrant is outstanding we grant, issue or sell any Preferred Stock Equivalents or rights to purchase shares, warrants, securities or other property pro rata to all of the record holders of the Series J Convertible Preferred Stock (the "Purchase Rights"), then the Holder or the Warrant will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of shares of Series J Convertible Preferred Stock acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of shares of Series J Convertible Preferred Stock are to be determined for the grant, issue or sale of such Purchase Rights.

Pro Rata Distributions. During such time as a Warrant is outstanding, if we shall declare or make any dividend or other distribution of our assets (or rights to acquire our assets) to holders of shares of Series J Convertible Preferred Stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, share or other securities, property or options by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) (except to the extent an adjustment was already made pursuant to the second preceding paragraph) (a "Distribution"), at any time after the issuance

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of the Warrants, then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Series J Convertible Preferred Stock acquirable upon complete exercise of the Warrant immediately before the date of which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Series J Convertible Preferred Stock are to be determined for the participation in such Distribution. Any Distribution or Distributions to be paid to any holder of shares of Series J Convertible Preferred Stock arising as a result of our obligation to issue PIK dividends on the Series J Convertible Preferred Stock pursuant to the Certificate of Designations, shall be held in trust for the benefit of such holder of shares of Series J Convertible Preferred Stock holding the Warrant at the time of exercise of the Warrant, and paid to such holder only upon such exercise.

Transferability. Subject to applicable laws, the Warrants may be offered for sale, sold, transferred or assigned without our consent.

No Listing. There is no established public trading market for, and we do not expect a market to develop for, the Warrants. In addition, we do not intend to apply for listing of the Warrants on any securities exchange or trading system, including Nasdaq. Without an active market, the liquidity of the Warrants will be limited.

Warrant Agent; Global Certificate. The Warrants will be issued in registered form under a Warrant Agency Agreement between us and the Warrant Agent, Equiniti Trust Company, LLC. The Warrants shall initially be represented only by one or more global warrants deposited with the Warrant Agent, as custodian on behalf of The Depository Trust Company (DTC) and registered in the name of Cede & Co., a nominee of DTC, or as otherwise directed by DTC.

Fundamental Transactions. In the event of a “fundamental transaction,” as defined in the Warrants and generally including any reorganization, recapitalization or reclassification of our common stock, the sale, transfer or other disposition of all or substantially all of our properties or assets, our consolidation or merger with or into another person, the acquisition of more than 50% of our outstanding common stock, or any person or group becoming the beneficial owner of 50% of the voting power represented by our outstanding common stock, the holders of the Warrants will be entitled to receive upon exercise of the Warrants the kind and amount of securities, cash or other property that the holders would have received had they exercised the Warrants immediately prior to such fundamental transaction.

Registration; Transfer. Pursuant to the terms of the Warrants, we are obligated to maintain an effective registration statement covering the issuance of the shares of Series J Convertible Preferred Stock upon exercise of the Warrants and the shares of common stock issuable upon conversion of such shares of Series J Convertible Preferred Stock until such time as no Warrants remain outstanding, unless there is available an exemption from, or a transaction not subject to, the registration requirements of the Securities Act that covers the issuance of the Series J Convertible Preferred Stock and the shares of common stock issuable upon conversion of such shares of Series J Convertible Preferred Stock.

Rights as a Stockholder. Except as otherwise provided in the Warrants or by virtue of such holder’s ownership of our common stock, the holder of a Warrant does not have the rights or privileges of a holder of our common stock, including any voting rights, until the holder exercises the Warrant and converts the shares of Series J Convertible Preferred Stock received upon such exercise into shares of common stock.

Governing Law. The Warrants and the Warrant Agency Agreement are governed by New York law.

DESCRIPTION OF CAPITAL STOCK

Description of Capital Stock

Our authorized capital stock consists of 100,000,000 shares of common stock, par value \$0.0001 per share, and 40,000,000 shares of preferred stock, par value \$0.0001 per share, 30,000 of which are designated as Series A Junior Participating Preferred Stock and 127 of which are designated Series F Convertible Preferred Stock (the “Series F Preferred Stock”) as of September 8, 2023. Once shares of Series F Preferred Stock are converted, redeemed or reacquired by us, such shares shall resume the status of authorized but unissued shares of undesignated preferred stock.

As of September 8, 2023, we had (i) 1,864,265 outstanding shares of common stock, (ii) 127 outstanding shares of Series F Preferred Stock, which, at the currently applicable conversion price, would convert into 5,080 shares of common stock, subject to future adjustment, (iii) outstanding options to acquire 111,960 shares of our common stock, and (iv) outstanding warrants to purchase 1,308,271 shares of our common stock.

The following description summarizes the most important terms of our capital stock. Because it is only a summary, it does not contain all the information that may be important to you. For a complete description you should refer to our certificate of incorporation, bylaws and certificate of designation of preferences, rights and limitations of Series F Preferred Stock, copies of which have been incorporated by reference as exhibits to the registration statement of which this prospectus forms a part, and to the applicable provisions of the DGCL.

Dividends

Holders of our common stock are entitled to receive dividends when and as declared by our board of directors out of funds legally available.

Voting

Holders of our common stock are entitled to one vote for each share on each matter properly submitted to our stockholders for their vote; provided however, that except as otherwise required by law, holders of our common stock will not be entitled to vote on any amendment to our certificate of incorporation (including any certificate of designation filed with respect to any series of preferred stock) that relates solely to the terms of a series of outstanding preferred stock if the holders of such affected series are entitled, either separately or together as a class with the holders of one or more other such series, to vote thereon by law or pursuant to our certificate of incorporation (including any certificate of designation filed with respect to any series of preferred stock).

Subject to the voting restrictions described above, holders of our common stock may adopt, amend or repeal our bylaws and/or alter certain provisions of our certificate of incorporation with the affirmative vote of the holders of at least 66 2/3% of the voting power of all of the then-outstanding shares of our capital stock entitled to vote generally in the election of directors, voting together as a single class, in addition to any vote of the holders of a class or series of our stock required by law or our certificate of incorporation. Those provisions of our certificate of incorporation that may be altered only by the super-majority vote described above relate to:

- the number of directors on our board of directors, the classification of our board of directors and the terms of the members of our board of directors;
- the limitations on removal of any of our directors described below under “Description of Capital Stock – Anti-Takeover Effects of Certain Provisions of Our Certificate of Incorporation and Bylaws and Delaware Law;”
- the ability of our directors to fill any vacancy on our board of directors by the affirmative vote of a majority of the directors then in office under certain circumstances;
- the ability of our board of directors to adopt, amend or repeal our bylaws and the super-majority vote of our stockholders required to adopt, amend or repeal our bylaws described above;
- the limitation on action of our stockholders by written action described below under “Description of Capital Stock —Anti-Takeover Effects of Certain Provisions of Our Certificate of Incorporation and Bylaws and Delaware Law;”

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- the choice of forum provision described below under “Description of Capital Stock –Choice of Forum;”
- the limitations on director liability and indemnification described below under the heading “Description of Capital Stock –Limitation on Liability of Directors and Indemnification;” and
- the super-majority voting requirement to amend our certificate of incorporation described above.

Conversion, Redemption and Preemptive Rights

Holders of our common stock do not have any conversion, redemption or preemptive rights pursuant to our organizational documents.

Liquidation, Dissolution and Winding-up

In the event of our liquidation, dissolution or winding up, holders of our common stock are entitled to share ratably in any assets remaining after the satisfaction in full of the prior rights of creditors and the aggregate of any liquidation preference pursuant to the terms of any certificate of designations filed with respect to any series of preferred stock, including our outstanding Series F Preferred Stock.

Listing

Our common stock is listed on the Nasdaq Capital Market under the symbol “NUWE.”

Description of Preferred Stock

We may issue any class of preferred stock in any series. Our board of directors has the authority to establish and designate series, and to fix the number of shares included in each such series and to determine or alter for each such series, such voting powers, designation, preferences, and relative participating, optional, or other rights and such qualifications, limitations or restrictions thereof. Our board of directors is not restricted in repurchasing or redeeming such stock while there is any arrearage in the payment of dividends or sinking fund installments. Our board of directors is authorized to increase or decrease the number of shares of any series subsequent to the issuance of shares of that series, but not below the number of shares of such series then outstanding. The number of authorized shares of preferred stock may be increased or decreased, but not below the number of shares thereof then outstanding, by the affirmative vote of the holders of a majority of the common stock, without a vote of the holders of the preferred stock, or of any series thereof, unless a vote of any such holders is required pursuant to the terms of any certificate of designation filed with respect to any series of preferred stock.

Prior to issuance of shares of any series of preferred stock, our board of directors is required by Delaware law to adopt resolutions and file a certificate of designation with the Secretary of State of the State of Delaware. The certificate of designation fixes for each class or series the terms, preferences, conversion or other rights, voting powers, restrictions, limitations as to dividends or other distributions, qualifications and terms or conditions of redemption for each class or series. Any shares of preferred stock will, when issued, be fully paid and non-assessable.

Outstanding Series F Convertible Preferred Stock. Our board of directors designated 18,000 shares of preferred stock as Series F convertible preferred stock, \$0.0001 par value. As of September 8, 2023, there were 127 shares of Series F Preferred Stock outstanding with a conversion price of \$25.00.

Liquidation. Upon any dissolution, liquidation or winding up, whether voluntary or involuntary, holders of Series F Preferred Stock will be entitled to receive distributions out of our assets, whether capital or surplus, of an amount equal to \$0.0001 per share of Series F Preferred Stock before any distributions shall be made on the common stock or any series of preferred stock ranked junior to the Series F Preferred Stock.

Dividends. Holders of the Series F Preferred Stock are entitled to receive dividends equal (on an “as converted to common stock” basis) to and in the same form as dividends actually paid on shares of our common stock when, as and if such dividends are paid on shares of our common stock. No other dividends will be paid on shares of Series F Preferred Stock.

Conversion. Each share of Series F Preferred Stock is convertible, at any time and from time to time at the option of the holder thereof, into that number of shares of common stock determined by dividing \$1,000 by the conversion price of \$25.00 (subject to adjustment described below). This right to convert is limited by the beneficial ownership limitation described below.

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Forced Conversion. Subject to certain ownership limitations as described below and certain equity conditions being met, until such time that during any 20 of 30 consecutive trading days, the volume weighted average price of our common stock exceeds 300% of the conversion price and the daily dollar trading volume during such period exceeds \$200,000 per trading day, we have the right to force the conversion of the Series F Preferred Stock into common stock.

Beneficial Ownership Limitation. A holder shall have no right to convert any portion of Series F Preferred Stock, to the extent that, after giving effect to such conversion, such holder, together with such holder's affiliates, and any persons acting as a group together with such holder or any such affiliate, would beneficially own in excess of 4.99% of the number of shares of common stock outstanding immediately after giving effect to the issuance of shares of common stock upon such conversion (subject to the right of the holder to increase such beneficial ownership limitation upon not less than 61 days prior notice provided that such limitation can never exceed 9.99% and such 61 day period cannot be waived). Beneficial ownership of the holder and its affiliates will be determined in accordance with Section 13(d) of the Exchange Act. Holders of Series F Preferred Stock who are subject to such beneficial ownership limitation are and will remain responsible for ensuring their own compliance with Regulation 13D-G promulgated under the Exchange Act, consistent with their individual facts and circumstances. In addition, pursuant to Rule 13d-3(d)(1)(i) promulgated under the Exchange Act, any person who acquires Series F Preferred Stock with the purpose or effect of changing or influencing the control of our company, or in connection with or as a participant in any transaction having such purpose or effect, immediately upon such acquisition will be deemed to be the beneficial owner of the underlying common stock.

Optional Redemption. Subject to the terms of the certificate of designation, the Company holds an option to redeem some or all the Series F Preferred Stock six months after its issuance date at a 200% premium to the stated value of the Series F Preferred Stock subject to the redemption, upon 30 days prior written notice to the holder of the Series F Preferred Stock. The Series F Preferred Stock would be redeemed by the Company for cash.

Conversion Price Adjustment

Subsequent Equity Sales. The Series F 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 Preferred Stock, including in this offering. If during any 20 of 30 consecutive trading days the volume weighted average price of our common stock exceeds 300% of the then-effective conversion price of the Series F Preferred Stock and the daily dollar trading volume for each trading day during such period exceeds \$200,000, the anti-dilution protection in the Series F Preferred Stock will expire and cease to apply.

Stock Dividends and Stock Splits. If we pay a stock dividend or otherwise make a distribution payable in shares of common stock on shares of common stock or any other common stock equivalents, subdivide or combine outstanding common stock, or reclassify common stock, the conversion price will be adjusted by multiplying the then conversion price by a fraction, the numerator of which shall be the number of shares of common stock outstanding immediately before such event, and the denominator of which shall be the number of shares outstanding immediately after such event.

Fundamental Transaction. If we effect a fundamental transaction in which we are the surviving entity, then upon any subsequent conversion of Series F Preferred Stock, the holder thereof shall have the right to receive, for each share of common stock that would have been issuable upon such conversion immediately prior to the occurrence of such fundamental transaction, the number of shares of our common stock and any additional consideration receivable as a result of such fundamental transaction by a holder of the number of shares of common stock into which Series F Preferred Stock is convertible immediately prior to such fundamental transaction. If we effect a fundamental transaction in which we are not the surviving entity or a reverse merger in which we are the surviving entity, then the surviving entity shall purchase the outstanding Series F Preferred Stock by paying and issuing, in the event that such consideration given to common stockholders is non-cash consideration, as the case may be, to such holder (or canceling such holder's outstanding Series F Preferred Stock and converting it into the right to receive) an amount equal to the greater of (i) the cash consideration plus the non-cash consideration (in the form issuable to the holders of common stock) per share of the common stock in the fundamental transaction multiplied by the number of conversion shares underlying the shares of Series F Preferred Stock held by the holder on the date of the consummation of the fundamental transaction or (ii) 130% of the stated value of the Series F Preferred Stock then outstanding on the date immediately prior to the

consummation of the fundamental transaction. Such amount shall be paid in the same form and mix (be it securities, cash or property, or any combination of the foregoing) as the consideration received by the common stock in such fundamental transaction. A fundamental transaction means: (i) our merger or consolidation with or into another entity, (ii) any sale or other disposition of all or substantially all of our assets in one transaction or a series of related transactions, (iii) any tender offer or exchange offer allowing holders of our common stock to tender or exchange their shares for cash, property or securities, and has been accepted by the holders of 50% or more of the outstanding common stock, (iv) any reclassification of our common stock or any compulsory share exchange by which common stock is effectively converted into or exchanged for other securities, cash or property, or (v) consummation of a stock or share purchase agreement or other business combination with another person whereby such other person acquires more than 50% of the outstanding shares of common stock.

Voting Rights, etc. Except as otherwise provided in the Series F Preferred Stock certificate of designation or required by law, the Series F Preferred Stock has no voting rights. However, as long as any shares of Series F Preferred Stock are outstanding, we may not, without the affirmative vote of the holders of a majority of the then outstanding shares of the Series F Preferred Stock, alter or change adversely the powers, preferences or rights given to the Series F Preferred Stock, amend its certificate of designation, amend our certificate of incorporation or other charter documents in any manner that adversely affects any rights of the holders, increase the number of authorized shares of Series F Preferred Stock, or enter into any agreement with respect to any of the foregoing. The Series F Preferred Stock certificate of designation provides that if any party commences an action or proceeding to enforce any provisions of the certificate of designation, then the prevailing party in such action or proceeding shall be reimbursed by the other party for its attorneys' fees and other costs and expenses incurred in the investigation, preparation and prosecution of such action or proceeding. This provision may, under certain circumstances, be inconsistent with federal securities laws and DGCL.

Fractional Shares. No fractional shares of common stock will be issued upon conversion of Series F Preferred Stock. Rather, we shall, at our election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the conversion price or round up to the next whole share.

The Series F Preferred Stock was issued in book-entry form under a preferred stock agent agreement between Equiniti Trust Company, LLC, formerly American Stock Transfer & Trust LLC as preferred stock agent, and us, and shall initially be represented by one or more book-entry certificates deposited with The Depository Trust Company, or DTC, and registered in the name of Cede & Co., a nominee of DTC, or as otherwise directed by DTC. There is no established public trading market for the Series F Preferred Stock, and the Series F Preferred Stock is not listed on the Nasdaq Capital Market, any other national securities exchange or any other nationally recognized trading system.

Description of Outstanding Warrants

As of September 8, 2023, there were warrants outstanding to purchase a total of 1,308,271 shares of our common stock, which expire between 2024 and 2028. Each of these warrants entitles the holder to purchase one share of common stock at prices ranging from \$3.2996 to \$189,000 per share. Certain of these warrants have a net exercise provision under which its holder may, in lieu of payment of the exercise price in cash, surrender the warrant and receive a net amount of shares based on the fair market value of our common stock at the time of exercise of the warrant after deduction of the aggregate exercise price. Each of these warrants also contains provisions for the adjustment of the exercise price and the aggregate number of shares issuable upon the exercise of the warrant in the event of dividends, share splits, reorganizations and reclassifications and consolidations. Certain of these warrants provide that, subject to limited exceptions, a holder will not have the right to exercise any portion of its warrants if the holder, together with its affiliates, would beneficially own over 4.99% of our then outstanding common stock following such exercise; provided, however, that upon prior notice to us, the warrant holder may increase its ownership, provided that in no event will the ownership exceed 9.99%.

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 will pilot the Aquadex ultrafiltration therapy system to treat adult patients with congestive heart failure and related conditions within select U.S. markets. The pilot period commenced on June 30, 2023 and extends through May 31, 2024 (the "Pilot"). The Company currently anticipates that the first patient to be treated with Aquadex in the Pilot will occur in the fourth quarter of 2023. Through the Pilot, ultrafiltration therapy using Aquadex will be offered at a combination of DaVita's customer hospital and outpatient center locations, with both companies collaborating on the roll-out

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of the therapy, clinician training, and patient support. At the conclusion of the pilot, DaVita has 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”).

In conjunction with the Supply Agreement, the Company issued DaVita a warrant to purchase up to an aggregate of 1,289,081 shares of common stock of the Company, par value \$0.0001 per share, at an exercise price of \$3.2996 per share, provided that at no time can it be exercised for an amount of shares that would represent greater than 19.9% ownership in the Company (the “DaVita Warrant”) subject to certain vesting milestones. The DaVita Warrant is expected to vest in four tranches as follows: (i) 25% upon the Company’s receipt of the Ultrafiltration Services Approval; (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.

Anti-Takeover Effects of Certain Provisions of Our Certificate of Incorporation and Bylaws and Delaware Law

Certain provisions of our certificate of incorporation and bylaws may be considered to have an anti-takeover effect, such as those provisions:

- providing for our board of directors to be divided into three classes with staggered three-year terms, with only one class of directors being elected at each annual meeting of our stockholders and the other classes continuing for the remainder of their respective three-year terms;
- authorizing our board of directors to issue from time to time any series of preferred stock and fix the voting powers, designation, powers, preferences and rights of the shares of such series of preferred stock;
- prohibiting stockholders from acting by written consent in lieu of a meeting;
- requiring advance notice of stockholder intention to put forth director nominees or bring up other business at a stockholders’ meeting;
- prohibiting stockholders from calling a special meeting of stockholders;
- requiring a 66 $\frac{2}{3}$ % super-majority stockholder approval in order for stockholders to alter, amend or repeal certain provisions of our certificate of incorporation;
- requiring a 66 $\frac{2}{3}$ % super-majority stockholder approval in order for stockholders to adopt, amend or repeal our bylaws;
- providing that, subject to the rights of the holders 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;
- creating the possibility that our board of directors could prevent a coercive takeover of our Company due to the significant amount of authorized, but unissued shares of our common stock and preferred stock;
- providing that, subject to the rights of the holders of any series of preferred stock, the number of directors shall be fixed from time to time exclusively by our board of directors pursuant to a resolution adopted by a majority of the total number of authorized directors; and
- providing that any vacancies on our board of directors under certain circumstances will be filled only by a majority of our board of directors then in office, even if less than a quorum, and not by the stockholders.

Delaware Law

We are also subject to Section 203 of the DGCL, which generally prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years following the date that the stockholder became an interested stockholder, unless:

- prior to that date, our board of directors approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;

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- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of our voting stock outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned by (i) persons who are directors and also officers and (ii) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or subsequent to that date, the business combination is approved by our board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

In general, Section 203 defines a “business combination” to include the following:

- any merger or consolidation involving the corporation or a direct or indirect majority-owned subsidiary of the corporation and the interested stockholder;
- any sale, lease, mortgage, pledge transfer, or other disposition of the assets of the corporation or direct or indirect majority-owned a subsidiary of the corporation to or with the interested stockholder, which assets have an aggregate value equal to 10% or more of the fair value of the assets on a consolidated basis or the aggregate market value of the outstanding stock of the corporation;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation or a direct or indirect majority-owned subsidiary of the corporation of any stock of the corporation or subsidiary to the interested stockholder;
- any transaction involving the corporation or direct or indirect majority-owned subsidiary of the corporation that has the effect of increasing the proportionate share of the stock or any class or series of the corporation or the subsidiary beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits by or through the corporation or direct or indirect majority-owned subsidiary of the corporation.

In general, Section 203 of the DGCL defines an interested stockholder as an entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by any of these entities or persons.

The above-summarized provisions of our certificate of incorporation and bylaws and the above-summarized provisions of the DGCL could make it more difficult to acquire us by means of a tender offer, a proxy contest or otherwise, or to remove incumbent officers and directors. These provisions are expected to discourage certain types of coercive takeover practices and takeover bids that our board of directors may consider inadequate and to encourage persons seeking to acquire control of us to first negotiate with our board of directors. We believe that the benefits of increased protection of our ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweigh the disadvantages of discouraging takeover or acquisition proposals because, among other things, negotiation of these proposals could result in an improvement of their terms.

Choice of Forum

Our Fourth Amended and Restated Certificate of Incorporation, as amended, provides that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will be the exclusive forum for any derivative action or proceeding brought on our behalf; any action asserting a breach of fiduciary duty; any action asserting a claim against us arising pursuant to the DGCL; or any action asserting a claim against us that is governed by the internal affairs doctrine. These provisions would not apply to suits brought to enforce a duty or liability created by the Exchange Act, or any other claim for which the federal courts have exclusive jurisdiction. Our Fourth Amended and Restated Certificate of Incorporation, as amended, will further provide that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act, subject to applicable law. Any person or entity purchasing or otherwise acquiring any interest in our securities shall be deemed to have notice of and consented to these provisions. Our exclusive forum provision will not relieve us of our duties to

comply with the federal securities laws and the rules and regulations thereunder, and our stockholders will not be deemed to have waived our compliance with these laws, rules and regulations.

The provisions of the DGCL, our Fourth Amended and Restated Certificate of Incorporation, as amended, and our Second Amended and Restated Bylaws could have the effect of discouraging others from attempting hostile takeovers and, as a consequence, they may also inhibit temporary fluctuations in the price of our common stock that often result from actual or rumored hostile takeover attempts. These provisions may also have the effect of preventing changes in our management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

Limitation on Liability of Directors and Indemnification

Our certificate of incorporation limits the liability of our directors to the fullest extent permitted by Delaware law. Delaware law provides that directors of a corporation will not be personally liable for monetary damages for breach of their fiduciary duties as directors, except for liability for any:

- breach of their duty of loyalty to us or our stockholders;
- act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payment of dividends or redemption of shares as provided in Section 174 of the DGCL; or
- transaction from which the directors derived an improper personal benefit.

These limitations of liability do not apply to liabilities arising under federal securities laws and do not affect the availability of equitable remedies such as injunctive relief or rescission.

Our bylaws provide that we will indemnify and advance expenses to our directors and officers to the fullest extent permitted by law or, if applicable, pursuant to indemnification agreements. They further provide that we may choose to indemnify our other employees or agents from time to time. Subject to certain exceptions and procedures, our bylaws also require us to advance to any person who was or is a party, or is threatened to be made a party, to any proceeding by reason of the person's service as one of our directors or officers all expenses incurred by the person in connection with such proceeding.

Section 145(g) of the DGCL and our bylaws also permit us to secure insurance on behalf of any officer, director, employee or other agent for any liability arising out of his or her actions in connection with their services to us, regardless of whether our bylaws permit indemnification. We maintain a directors' and officers' liability insurance policy.

We entered into indemnification agreements with each of our directors and executive officers that provide, in general, that we will indemnify them to the fullest extent permitted by law in connection with their service to us or on our behalf and, subject to certain exceptions and procedures, that we will advance to them all expenses that they incur in connection with any proceeding to which they are, or are threatened to be made, a party.

At present, there is no pending litigation or proceeding involving any of our directors or officers as to which indemnification is required or permitted, and we are not aware of any threatened litigation or proceeding that may result in a claim for indemnification.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Company pursuant to the foregoing provisions, or otherwise, the Company has been advised that in the opinion of the SEC this indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

Registration Rights

DaVita Supply Agreement. Concurrent with the signing of the Supply Agreement and issuance of the DaVita Warrant June 19, 2023, the Company entered into a Registration Rights Agreement ("Registration Rights Agreement") with DaVita, whereby the Company agreed, subject to DaVita's delivery of the Ultrafiltration Services Approval, to register the resale of the shares of common stock issuable upon exercise of the DaVita Warrant ("Underlying Shares") on a Form S-1 or Form S-3, if eligible, upon DaVita's demand. DaVita has "piggyback" registration rights allowing it to include its Underlying Shares in a registration effected by the Company for stockholders other than DaVita. The Company is responsible for all fees and expenses incident to the performance of or compliance with the Registration Rights Agreement borne by the Company whether or not any registrable securities are sold pursuant to a registration statement. The Registration Rights Agreement also contains customary indemnification provisions.

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES

The following is a discussion of material U.S. federal income tax considerations relevant to the purchase, ownership, disposition and conversion of the Series J Convertible Preferred Stock and the acquisition, ownership and disposition of our common stock received upon conversion of the Series J Convertible Preferred Stock, as well as the purchase, ownership, disposition and exercise of the Warrants. The following discussion is based upon the provisions of the Internal Revenue Code of 1986, as amended (the “Code”), Treasury Regulations and judicial and administrative authority, all of which are subject to change, possibly with retroactive effect, or to different interpretations. We cannot assure you that a change in the law will not significantly alter the tax consequences that we describe in this discussion. We have not sought any ruling from the Internal Revenue Service (the “IRS”) or opinion of counsel with respect to the statements made and conclusions reached in this discussion, and there can be no assurance that the IRS or a court will agree with these statements and conclusions in this discussion.

This discussion does not address all aspects of U.S. federal income taxation that may be relevant to an investor’s decision to purchase the Units, nor any tax consequences arising under U.S. federal estate or gift tax laws or under the laws of any state, locality or foreign jurisdiction. This discussion also does not address the Medicare tax on certain investment income or the tax consequences that may be applicable to special classes of investors including, but not limited to, tax-exempt organizations, qualified foreign pension funds, insurance companies, banks or other financial institutions, partnerships or other pass-through entities or holders of interests therein, dealers in securities or currency, persons liable for the alternative minimum tax, U.S. expatriates and former long-term U.S. residents, traders in securities that elect to use a mark-to-market method of accounting for their securities holdings, regulated investment companies, real estate investment trusts, “controlled foreign corporations,” “passive foreign investment companies,” common trust funds, certain trusts, hybrid entities, U.S. holders whose “functional currency” is not the U.S. dollar, foreign governments or international organizations and persons that will hold our Series J Convertible Preferred Stock, our common stock received upon conversion of the Series J Convertible Preferred Stock or the Warrants as a position in a “straddle,” “conversion transaction” or other risk reduction transaction. This discussion is limited to taxpayers who will hold our Series J Convertible Preferred Stock, our common stock received upon conversion of our Series J Convertible Preferred Stock and the Warrants as “capital assets” (generally, property held for investment).

If a partnership (including an entity or arrangement treated as a partnership for U.S. federal income tax purposes) holds our Series J Convertible Preferred Stock, our common stock received upon conversion of our Series J Convertible Preferred Stock or the Warrants, the tax treatment of a partner in the partnership will generally depend upon the status of the partner and upon the activities of the partnership. Accordingly, we urge partnerships (including entities and arrangements treated as partnerships for U.S. federal income tax purposes) that hold our Series J Convertible Preferred Stock, our common stock received upon conversion of our Series J Convertible Preferred Stock or the Warrants and partners in such partnerships to consult their tax advisors.

This discussion is addressed to a holder of our Series J Convertible Preferred Stock, our common stock received upon conversion of the Series J Convertible Preferred Stock or the Warrants that is a U.S. holder or non-U.S. holder for U.S. federal income tax purposes. You are a “U.S. holder” if you are a beneficial owner of Series J Convertible Preferred Stock, our common stock received upon conversion of the Series J Convertible Preferred Stock or the Warrants and you are, for U.S. federal income tax purposes:

- An individual citizen or resident of the United States;
- a corporation, or other entity taxable as a corporation for U.S. federal income tax purposes, that was created or organized in or under the laws of the United States, any state thereof or the District of Columbia;
- an estate whose income is subject to U.S. federal income tax regardless of its source; or
- a trust (i) whose administration is subject to the primary supervision of a U.S. court and which has one or more U.S. persons who have the authority to control all substantial decisions of the trust or (ii) which has made a valid election to be treated as a U.S. person.

A “non-U.S. Holder” is a beneficial holder of our Series J Convertible Preferred Stock, our common stock received upon conversion of the Series J Convertible Preferred Stock or the Warrants who or that is neither a U.S. holder nor a partnership for U.S. federal income tax purposes.

We urge each prospective investor to consult with its own tax adviser as to the U.S. federal, state, local, foreign and any other tax consequences of the purchase, ownership, conversion and disposition of our Series J Convertible Preferred Stock and of the acquisition, ownership and disposition of our common stock received upon conversion of the Series J Convertible Preferred Stock, as well as the purchase, ownership, disposition, and exercise of the Warrants.

General Treatment of Units

There is no authority directly addressing the treatment, for U.S. federal income tax purposes, of instruments with terms substantially the same as the Units and, therefore, their treatment is not entirely clear. The purchase of a Unit should be treated for U.S. federal income tax purposes as the purchase of one share of our Series J Convertible Preferred Stock and one Warrant to acquire one-half of one share of our Series J Convertible Preferred Stock. We intend to treat the purchase of a Unit in this manner and, by purchasing a Unit, you agree to adopt such treatment for tax purposes. Each holder of a Unit must allocate the purchase price paid by such holder for such Unit between the share of our Series J Convertible Preferred Stock and one Warrant to acquire one-half of one share of our Series J Convertible Preferred Stock based on their respective relative fair market values. A holder's initial tax basis in the one share of our Series J Convertible Preferred Stock and one Warrant to acquire one-half of one share of our Series J Convertible Preferred Stock included in each Unit should equal the portion of the purchase price of the Unit allocated thereto. The separation of the Series J Convertible Preferred Stock and Warrant constituting a Unit should not be a taxable event for U.S. federal income tax purposes.

The foregoing treatment of the Units and a holder's purchase price allocation are not binding on the IRS or the courts. Because there is no authority that directly addresses instruments that are similar to the Units, no assurance can be given that the IRS or the courts will agree with the characterization described above or the discussion below. The following discussion is based on the assumption that the characterization of the Series J Convertible Preferred Stock and the Warrant and the allocation described above are respected for U.S. federal income tax purposes.

Each prospective investor is urged to consult its tax advisors regarding the U.S. federal, state, local and any foreign tax consequences of an investment in a Unit (including possible alternative characterizations of a Unit and its components).

U.S. Holders

Distributions on Series J Convertible Preferred Stock or Common Stock

Distributions in General.

Distributions paid on our Series J Convertible Preferred Stock and our common stock (other than certain stock distributions with respect to our Series J Convertible Preferred Stock and common stock) will be treated as dividends to the extent of our current or accumulated earnings and profits, as determined under the Code. To the extent that the amount of distributions with respect to our Series J Convertible Preferred Stock or common stock exceeds our current and accumulated earnings and profits, such excess will be treated first as a tax-free return of capital to the extent of (and in reduction of) the U.S. holder's adjusted tax basis in such Series J Convertible Preferred Stock or common stock, as the case may be, on a share-by-share basis, and thereafter as capital gain. Such gain will be long-term capital gain provided that the U.S. holder has held such Series J Convertible Preferred Stock or common stock, as the case may be, for more than one year as of the time of the distribution. Subject to applicable limitations and restrictions, dividends paid to non-corporate U.S. holders will be subject to a reduced U.S. federal income tax rate if such dividends are treated as "qualified dividend income" for U.S. federal income tax purposes. Subject to applicable limitations and restrictions, dividends paid to U.S. holders that are U.S. corporations are subject to tax at ordinary corporate income tax rates, but will qualify for the dividends received deduction. However, any distribution (or the portion of any distribution) that exceeds our current and accumulated earnings and profits will not be eligible for the dividends received deduction. **A U.S. holder should consult its own tax adviser regarding the availability of the reduced U.S. federal income tax rate applicable to "qualified dividend income" or the dividends received deduction, as applicable, in the light of its particular circumstances.**

Redemption Premium with respect to the Series J Convertible Preferred Stock.

Because the Series J Convertible Preferred Stock is being offered at a discount (*i.e.*, the OID) to the Series J Convertible Preferred Stock stated value, which is the price at which the Series J Convertible Preferred Stock will be redeemed on the third anniversary of the date of original issuance of the Series J Convertible Preferred Stock (if not previously converted), we intend to take the position that the Series J Convertible Preferred Stock issued in this offering will be issued with a “redemption premium” under Section 305(c) of the Code that exceeds the statutory *de minimis* amount. U.S. holders of Series J Convertible Preferred should be treated as receiving constructive distributions as the redemption premium accrues under a constant yield method. Such distributions should have the consequences described in “Distributions in General” above.

PIK Dividends Distributions on Series J Convertible Preferred Stock.

Our payment of a distribution on the Series J Convertible Preferred Stock in the form Series J Convertible Preferred Stock (*i.e.*, a PIK dividend) will generally be taxable for U.S. federal income tax purposes in the same manner as distributions described in “Distributions in General” above. The amount of such distribution will equal the fair market value on the distribution date of the Series J Convertible Preferred Stock distributed to a U.S. holder on that date. A U.S. holder’s tax basis in such distributed Series J Convertible Preferred Stock will equal the fair market value of such Series J Convertible Preferred Stock on the distribution date, and such U.S. holder’s holding period for such Series J Convertible Preferred Stock will begin on the day following the distribution date.

Extraordinary Dividends.

If a dividend received by a non-corporate U.S. holder that qualifies for the rate reduction for “qualified dividend income” is an “extraordinary dividend” within the meaning of Section 1059 of the Code, such non-corporate U.S. holder would be required to treat any losses on the sale of Series J Convertible Preferred Stock or common stock as long-term capital loss to the extent of such “extraordinary dividend,” irrespective of such holder’s holding period for the stock.

Investors that are U.S. corporations that receive an “extraordinary dividend” within the meaning of Section 1059 of the Code in respect of our Series J Convertible Preferred Stock or common stock generally would be required to reduce their tax basis in our Series J Convertible Preferred Stock or common stock (but not below zero) by the portion of the dividend that is not taxed because of the dividends received deduction. To the extent the non-taxed portion of such dividend exceeds the corporate investor’s stock basis, such investor must treat such excess as gain from the sale or exchange of our Series J Convertible Preferred Stock or common stock for the taxable year in which such dividend is received.

Adjustment to the Conversion Price of Series J Convertible Preferred Stock.

The conversion price of the Series J Convertible Preferred Stock is subject to adjustment under certain circumstances pursuant to the Anti-Dilution Provisions. Treasury Regulations promulgated under Section 305 of the Code would treat a U.S. holder of our Series J Convertible Preferred Stock as having received a constructive distribution includable in such U.S. holder’s income in the manner described in “Distributions in General” above, if and to the extent that certain adjustments (or failures to make adjustments) in the conversion price increase the proportionate interest of the U.S. holder in our assets or earnings and profits. For example, a decrease in the conversion price to reflect a taxable dividend to holders of common stock will generally give rise to a deemed taxable dividend to the holders of Series J Convertible Preferred Stock to the extent of an allocable portion of our current and accumulated earnings and profits. Thus, under certain circumstances, U.S. holders may recognize income in the event of a constructive distribution even though they may not receive any cash or property. Adjustments to the conversion price made pursuant to a bona fide reasonable adjustment formula that has the effect of preventing dilution in the interest of the U.S. holders of the Series J Convertible Preferred Stock (other than an adjustment in respect of a taxable dividend on the common stock), however, generally will not be considered to result in a constructive distribution.

Sale, Exchange or Other Taxable Disposition of Series J Convertible Stock, Common Stock and Warrants

Sale, Exchange or Other Taxable Disposition – General.

A U.S. holder will generally recognize capital gain or loss on a sale, exchange or other taxable disposition of our Series J Convertible Preferred Stock (other than pursuant to a conversion into common stock), our

common stock, or the Warrants equal to the difference between the amount realized upon the sale, exchange or other taxable disposition (not including any proceeds attributable to any dividends in arrears, which generally will be taxable as described under “Distributions in General” above to U.S. holders who have not previously included such dividends in income) and the U.S. holder’s adjusted tax basis in the shares sold, exchanged or disposed in another taxable transaction. Such capital gain or loss will be long-term capital gain or loss if the U.S. holder’s holding period for the shares sold, exchange or disposed is more than one year. Long-term capital gains of non-corporate taxpayers generally are subject to a reduced rate of taxation. The deductibility of capital losses is subject to limitations.

Redemption of Series J Convertible Preferred Stock.

If we redeem our Series J Convertible Preferred Stock solely in exchange for common stock, the tax consequences to a U.S. holder would be as described in “Conversion of Series J Convertible Preferred Stock into Common Stock” below (except that any common stock received in respect of dividends in arrears generally will be taxable as described in “Distributions in General” above).

If we redeem our Series J Convertible Preferred Stock solely in exchange for cash, the redemption would be treated as a sale or exchange if the redemption (i) results in a meaningful reduction in the U.S. holder’s interest in us or (ii) results in a complete termination of the U.S. holder’s entire equity interest in us (in either case, within the meaning of Section 302(b) of the Code). If the redemption qualifies as a sale or exchange under one of these rules, the tax consequences to a U.S. holder would be as described in “Sale, Exchange or Other Taxable Disposition-General” above. If the redemption does not qualify as a sale or exchange for tax purposes under the rules described above, the amount of cash received by a U.S. holder would be treated as described in “Distributions in General” above.

If we redeem our Series J Convertible Preferred Stock in exchange for a combination of cash and common stock, a U.S. holder could not recognize a loss but would recognize gain equal to the lesser of (i) the excess of the sum of the fair market value of the common stock and the amount of cash received (not including any proceeds attributable to any dividends in arrears, which generally will be taxable as described in “Distributions in General” above) over the U.S. holder’s adjusted tax basis in the Series J Convertible Preferred Stock redeemed, and (ii) the amount of cash received by the U.S. holder (not including any proceeds attributable to any dividends in arrears, which generally will be taxable as described under “Distributions in General” above). The character of such gain is uncertain. If the redemption results in a meaningful reduction in the U.S. holder’s interest in us (within the meaning of Section 302(b) of the Code), then the gain would be capital gain that is taxed as described in “Sale, Exchange or Other Taxable Disposition-General” above. If the redemption does not qualify as a sale or exchange for tax purposes under one of these rules, the gain recognized by you would be treated as described in “Distributions in General” above. The initial adjusted tax basis of common stock received by a U.S. holder upon redemption will be equal to the U.S. holder’s aggregate adjusted tax basis in the Series J Convertible Preferred Stock redeemed, reduced by the amount of any cash received (other than cash attributable to accrued but unpaid dividends), and increased by the amount of gain, if any, recognized. The holding period for the shares of common stock received by the U.S. holder upon redemption of the Series J Convertible Preferred Stock generally will include the U.S. holder’s holding period in the Series J Convertible Preferred Stock redeemed, except that the holding period of any common stock received with respect to dividends in arrears will commence on the day after the date of receipt.

Conversion of Series J Convertible Preferred Stock into Common Stock.

A U.S. holder generally will not recognize any gain or loss in respect of the receipt of common stock upon the conversion of our Series J Convertible Preferred Stock into common stock. Cash received in lieu of a fractional share of common stock will generally be treated as a payment in a taxable exchange for such fractional share, and gain or loss will be recognized on the receipt of cash in an amount equal to the difference between the amount of cash received and the amount of adjusted tax basis in the stock that is allocable to the fractional share.

The adjusted tax basis of common stock received on conversion will equal the adjusted tax basis of the Series J Convertible Preferred Stock converted (reduced by the portion of adjusted tax basis allocated to any fractional shares of common stock exchanged for cash, as described above), and the holding period of such common stock received on conversion will generally include the period during which the Series J Convertible

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Preferred Stock was held by the U.S. holder prior to conversion. A U.S. holder's tax basis in a fractional share will be determined by allocating such U.S. holder's tax basis in the Series J Convertible Preferred Stock between the common stock such U.S. holder receives upon conversion and the fractional share in accordance with their respective fair market values.

If a U.S. holder exercises its right to convert the Series J Convertible Preferred Stock into shares of common stock after a regular record date but before the Dividend Record Date, then upon conversion, the U.S. holder generally will be required to pay to us in cash an amount equal to the portion of such dividend attributable to the current monthly dividend period. In this case, the U.S. holder will be entitled to receive the dividend payment on the corresponding Dividend Record Date. A U.S. holder should consult its own tax adviser with respect to the treatment of such cash payment and the subsequent receipt of such dividend payment.

Exercise or Lapse of Warrants

A U.S. holder will not recognize gain or loss on the exercise of a Warrant. A U.S. holder's tax basis in the one-half of one share of Series J Convertible Preferred Stock received upon the exercise of a Warrant will equal the sum of (i) the initial tax basis of the Warrant exercised (as determined pursuant to the rules discussed in "General Treatment of Units" above) and (ii) the exercise price of the Warrant. The U.S. holder's holding period for the one-half of one share of Series J Convertible Preferred Stock received upon exercise of a Warrant will begin on the day after such exercise (or possibly on the date of exercise) and will not include the period during which the U.S. holder held the Warrant. If a Warrant is allowed to lapse unexercised, a U.S. holder generally will recognize a capital loss equal to such holder's tax basis in the Warrant. Such loss will be a long-term capital loss if the Warrant has been held for more than one year as of the date the Warrant lapsed. The deductibility of capital losses is subject to limitations.

Constructive Distributions on the Warrants

Under Section 305 of the Code, an adjustment to the number of shares of Series J Convertible Preferred Stock that will be issued upon the exercise of our Warrants, or an adjustment to the exercise price of such Warrants, may be treated as a constructive distribution to a U.S. holder of the Warrants if, and to the extent that, such adjustment has the effect of increasing such U.S. holder's proportionate interest in our "earnings and profits" or assets, depending on the circumstances of such adjustment (for example, if such adjustment is to compensate for a distribution of cash or other property to holders of our common stock). Adjustments to the exercise price of a Warrant made pursuant to a bona fide reasonable adjustment formula that has the effect of preventing dilution of the interest of the holder of the Warrant should generally not result in a constructive distribution. Any constructive distributions generally would be subject to the tax treatment described in "Distributions in General" above.

Information Reporting and Backup Withholding

In general, information reporting requirements may apply to distributions (whether actual or constructive) paid to a U.S. holder on our Series J Convertible Preferred Stock, our common stock received upon conversion of the Series J Convertible Preferred Stock or the Warrants, and to the proceeds of the sale, exchange or other disposition of our Series J Convertible Preferred Stock or the Warrants, unless the U.S. holder is an exempt recipient. Backup withholding will apply to such payments if the U.S. holder fails to provide a taxpayer identification number or a certification of exempt status or has been notified by the IRS that it is subject to backup withholding (and such notification has not been withdrawn). Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules will be allowed as a refund or a credit against a U.S. holder's U.S. federal income tax liability provided the required information is timely furnished to the IRS.

U.S. holders are urged to consult their own tax advisers regarding the application of backup withholding in their particular circumstances and the availability of and procedure for obtaining an exemption from backup withholding under current Treasury Regulations.

Non-U.S. Holders

Distributions on Series J Convertible Preferred Stock or Common Stock

Distributions in General.

Generally, distributions (including any constructive distributions taxable as dividends as described below and any cash paid upon a conversion that is treated as a dividend) treated as dividend income and paid to a non-U.S. holder with respect to our Series J Convertible Preferred Stock or our common stock will be subject to a 30% U.S. withholding tax, or such lower rate as may be specified by an applicable tax treaty. Any required withholding tax might be satisfied by the withholding agent through a sale of a portion of the shares you receive as a dividend or might be withheld from cash dividends or sales proceeds subsequently paid or credited to you. To receive the benefit of a reduced treaty rate, a non-U.S. holder must provide the applicable withholding agent with an IRS Form W-8BEN, IRS Form W-8BEN-E, or other appropriate version of IRS Form W-8 certifying qualification for the reduced rate. A non-U.S. holder of our Series J Convertible Preferred Stock or our common stock may obtain a refund of any excess amounts withheld under these rules if the non-U.S. holder is eligible for a reduced rate of United States withholding tax and an appropriate claim for refund is timely filed with the IRS.

Dividends that are effectively connected with a trade or business carried on by a non-U.S. holder within the United States, and, to the extent an applicable tax treaty provides, attributable to a permanent establishment or fixed base maintained by the non-U.S. holder in the United States, will generally be subject to U.S. federal income tax on a net basis at the individual or corporate income tax rates generally applicable to U.S. holders, but will not be subject to U.S. withholding tax if certain certification requirements are satisfied. A non-U.S. holder can generally meet the certification requirements by providing a properly executed IRS Form W-8ECI or appropriate substitute form to the applicable withholding agent. A non-U.S. holder that is a corporation may also be subject to a “branch profits tax” at a 30% rate (or such lower rate as may be specified by an applicable tax treaty) on its “effectively connected earnings and profits,” subject to certain adjustments, which will include effectively connected dividends.

Redemption Premium with respect to the Series J Convertible Preferred Stock.

As described in “U.S. Holders-Redemption Premium with respect to the Series J Convertible Preferred Stock” above, we intend to take the position that, on account of the OID, the Series J Convertible Preferred Stock issued in this offering will be issued with a “redemption premium” under Section 305(c) of the Code that exceeds the statutory *de minimis* amount. U.S. holders of Series J Convertible Preferred should be treated as receiving constructive distributions as the redemption premium accrues under a constant yield method. Such distributions should have the consequences described in “non-U.S. Holders—Distributions on Series J Convertible Preferred Stock or Common Stock— Distributions in General” above.

PIK Dividends Distributions on Series J Convertible Preferred Stock.

Any dividends paid on our Series J Convertible Preferred Stock in shares of Series J Convertible Preferred Stock and taxed as dividend income as described in “U.S. Holders—Distributions on Series J Convertible Preferred Stock or Common Stock— PIK Dividends Distributions on Series J Convertible Preferred Stock” above will be subject to withholding tax in the same manner as described in non-U.S. Holders—Distributions on Series J Convertible Preferred Stock or Common Stock— Distributions in General” above.

Adjustment to the Conversion Price of Series J Convertible Preferred Stock.

As described above under “Consequences to U.S. Holders with respect to Series J Convertible Preferred Stock or Common Stock—Adjustment of Conversion Price,” adjustments in the conversion price (or failures to adjust the conversion price) that result in an increase in the proportionate interest of a non-U.S. holder in our assets or earnings and profits could result in deemed distributions to the non-U.S. holder that are taxed as described in “Distributions in General” above. It is possible that any withholding tax on such a deemed distribution might be satisfied by the withholding agent through a sale of a portion of the shares you receive as a dividend or might be withheld from cash dividends, shares of our common stock or sale proceeds subsequently paid or credited to you.

Sale, Exchange or Other Taxable Disposition of Series J Convertible Stock, Common Stock and Warrants

Sale, Exchange or Other Taxable Disposition – General.

Subject to the discussion under “Information Reporting and Backup Withholding” and “FATCA” below, a non-U.S. holder generally will not be subject to U.S. federal income or withholding tax on any gain realized on the sale, exchange or other taxable disposition (other than a redemption) of our Series J Convertible Preferred Stock, our common stock or the Warrants unless:

- the gain is effectively connected with the non-U.S. holder’s conduct of a U.S. trade or business and, if an applicable income tax treaty so provides, is attributable to a “permanent establishment” or a “fixed base” maintained by such non-U.S. holder in the United States, in which case the non-U.S. holder generally will be taxed on such gain at the graduated U.S. federal income tax rates applicable to U.S. holders (as described in “U.S. Holders-Sale, Exchange or Other Taxable Disposition of Series J Convertible Stock, Common Stock and Warrants-Sale, Exchange or Other Taxable Disposition – General” above and, if the non-U.S. holder is a foreign corporation, the branch profits tax described in “Distributions in General” above also may apply to such gain;
- the non-U.S. holder is a nonresident alien individual who is present in the United States for 183 days or more in the taxable year of the taxable disposition and certain other conditions are met, in which case the non-U.S. holder will be subject to a 30% tax (or such lower rate as may be specified by an applicable income tax treaty between the United States and such holder’s country of residence) on the net gain derived from the taxable disposition, which may be offset by certain U.S. source capital losses of the non-U.S. holder, if any; or
- we are, or have been, at any time during the five-year period preceding such taxable disposition (or the non-U.S. holder’s holding period, if shorter) a “U.S. real property holding corporation” (“USRPHC”). We believe that we are not, and we do not expect to be for the foreseeable future, a USRPHC (and this discussion assumes we are not and will not be a USRPHC).

Redemption of Series J Convertible Preferred Stock.

If we redeem our Series J Convertible Preferred Stock solely in exchange for common stock, the tax consequences to a non-U.S. holder would be as described above under “U.S. Holders—Conversion of Series J Convertible Preferred Stock into Common Stock” (except that any common stock received in respect of dividends in arrears generally will be taxable as described in “Sale, Exchange, or Other Taxable Disposition – General” above).

If we redeem our Series J Convertible Preferred Stock solely in exchange for cash, the redemption would be treated as a sale or exchange if the redemption results in a meaningful reduction in the non-U.S. holder’s interest in us, or results in a complete termination of the non-U.S. holder’s entire equity interest in us (in each case, within the meaning of Section 302(b) of the Code). If the redemption qualifies as a sale or exchange under one of these rules, the tax consequences to a non-U.S. holder would be as described in “Sale, Exchange or Other Taxable Disposition – General” above. If the redemption does not qualify as a sale or exchange for tax purposes under the rules described above, the amount of cash received by a non-U.S. holder would be treated as described in “Distributions in General” above.

If we redeem our Series J Convertible Preferred Stock in exchange for a combination of cash and common stock, a non-U.S. holder would recognize gain (but not loss) equal to the lesser of (i) the excess of the sum of the fair market value of the common stock and the amount of cash received (not including any proceeds attributable to any dividends in arrears, which generally will be taxable as described under “Distributions in General” above) over the non-U.S. holder’s adjusted tax basis in the Series J Convertible Preferred Stock redeemed, and (ii) the amount of cash received by the non-U.S. holder (not including any proceeds attributable to any dividends in arrears, which generally will be taxable as described under “Distributions in General” above).

The tax treatment of any such gain to non-U.S. holders is uncertain. If the redemption results in a meaningful reduction in the non-U.S. holder’s interest in us (in either case, within the meaning of Section 302(b) of the Code), then the gain generally would be taxed only as described under “Sale, Exchange or Other Taxable Disposition – General” above. If the redemption does not qualify as a sale or exchange for tax purposes under

one of these rules, the gain generally would be treated as described under “Distributions in General” above. Because the characterization of a taxable redemption of the Series J Convertible Preferred Stock is uncertain and is determined on a holder-by-holder basis, it is possible that a withholding agent would withhold on the cash proceeds received.

Conversion of Series J Convertible Preferred Stock into Common Stock.

You generally will not recognize any gain or loss by reason of receiving common stock upon conversion of the Series J Convertible Preferred Stock, except gain or loss will be recognized with respect to any cash received in lieu of fractional shares, which may be subject to U.S. federal income tax, as discussed in “Sale, Exchange or Other Taxable Disposition – General” above.

Exercise or Lapse of Warrants

In general, a non-U.S. holder will not be required to recognize gain or loss upon the exercise of a Warrant by payment of the exercise price. The lapse of a Warrant will be treated as if the non-U.S. holder sold or exchanged the Warrant and recognized a capital loss equal to the non-U.S. holder’s basis in the Warrant. A non-U.S. holder will not be able to utilize a loss recognized upon expiration of a Warrant against the non-U.S. holder’s U.S. federal income tax liability, however, unless the loss (i) is effectively connected with the non-U.S. holder’s conduct of a trade or business within the United States (and, if an income tax treaty applies, is attributable to a “permanent establishment” or “fixed base” in the United States) or (ii) is treated as a U.S. source loss and the non-U.S. holder is present in the United States 183 days or more in the taxable year of disposition and certain other conditions are met.

Constructive Distributions on the Warrants

As described in “U.S. Holders—Constructive Distributions on the Warrants” above, an adjustment to the Warrants could result in a constructive distribution to a non-U.S. holder, which would be treated as described in “Distributions in General” above. Any resulting withholding tax attributable to deemed dividends would be collected from other amounts payable or distributable to the non-U.S. holder.

Non-U.S. holders should consult their tax advisors regarding the tax treatment of any adjustments to the Warrants.

Information Reporting and Backup Withholding.

Payment of dividends (including constructive dividends), and the tax withheld with respect thereto, is subject to information reporting requirements. These information reporting requirements apply regardless of whether withholding was reduced or eliminated by an applicable tax treaty or withholding was not required because the dividends were effectively connected with a trade or business in the United States conducted by the non-U.S. holder. Copies of the information returns reporting such dividends and withholding may also be made available under the provisions of an applicable tax treaty or agreement with the tax authorities in the country in which the non-U.S. holder resides. U.S. backup withholding will generally apply to the payment of dividends to non-U.S. holders unless such non-U.S. holders furnish to the payor a Form W-8BEN or Form W-8BEN-E (or other applicable form) or otherwise establish an exemption.

Payment by a U.S. office of a broker of the proceeds of a sale of our Series J Convertible Preferred Stock, our common stock or the Warrants is subject to both backup withholding and information reporting unless the non-U.S. holder, or beneficial owner thereof, as applicable, certifies that it is a non-U.S. holder on Form W-8BEN or Form W-8BEN-E (or other suitable substitute or successor form), or otherwise establishes an exemption. Subject to certain exceptions, backup withholding and information reporting generally will not apply to a payment of proceeds from the sale of our Series J Convertible Preferred Stock, our common stock or the Warrants if such sale is effected through a foreign office of a broker, provided that the broker does not have certain U.S. connections.

Amounts withheld under the backup withholding rules from a payment to a non-U.S. holder are not additional taxes and may be refunded or credited against such holder’s U.S. federal income tax liability (if any), which may entitle the holder to a refund if in excess of such liability, provided that the holder timely provides

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the required information to the IRS. Non-U.S. holders are urged to consult their own tax advisers regarding the application of backup withholding in their particular circumstances and the availability of and procedure for obtaining an exemption from backup withholding under current Treasury Regulations.

FATCA.

Sections 1471 to 1474 of the Code (such sections, and the Treasury Regulations and administrative guidance issued thereunder, commonly referred to as “FATCA”) impose a 30% U.S. withholding tax on certain “withholdable payments” made to a “foreign financial institution” or a “non-financial foreign entity.” “Withholdable payments” include payments of dividends. In general, if a holder is a “foreign financial institution” (which includes investment entities such as hedge funds and private equity funds), the 30% withholding tax will apply to withholdable payments made to such holder, unless such holder enter into an agreement with the U.S. Department of Treasury to collect and provide substantial information regarding its U.S. account holders, including certain account holders that are foreign entities with U.S. owners. If such holder is a “non-financial foreign entity,” FATCA also generally will impose a withholding tax of 30% on withholdable payments made to such holder unless the holder provide the withholding agent with a certification that it does not have any “substantial United States owners” or a certification identifying its direct and indirect substantial United States owners. Intergovernmental agreements between the United States and a holder’s resident country may modify some of the foregoing requirements. The Treasury Secretary has issued proposed regulations providing that the withholding provisions under FATCA do not apply with respect to the gross proceeds from a sale or other disposition of Class J Common Stock, which may be relied upon by taxpayers until final regulations are issued.

Non-U.S. holders should consult their own tax advisers with respect to the U.S. federal income tax consequences of FATCA on their ownership and disposition of our Series J Convertible Preferred Stock, our common stock and the Warrants.

Excise Tax

We may be subject to the Excise Tax (as defined below) included in the Inflation Reduction Act (“IRA”) enacted in August 2022 in connection with redemptions of our Series J Convertible Preferred Stock or our common stock. In particular, an excise tax is imposed on “covered corporations” (generally, publicly-traded domestic corporations) equal to 1% of the fair market value of certain stock repurchased after December 31, 2022 (the “Excise Tax”). The Excise Tax base is reduced by the fair market value of any issuances of the covered corporation’s stock during its taxable year. The fair market value of any of shares our Series J Convertible Preferred Stock or common stock that are redeemed may exceed the fair market value of any of our stock issued during the same taxable year. Consequently, the Excise Tax may reduce the amount of cash we have available to shareholders.

The preceding discussion of material U.S. federal income tax consequences is for informational purposes only. It is not tax advice. Prospective investors should consult their own tax advisors regarding the particular U.S. federal, state, local and non-U.S. tax consequences of purchasing, holding and disposing of our Units, Series J Convertible Preferred Stock, our common stock or the Warrants, including the consequences of any proposed changes in applicable laws.

PLAN OF DISTRIBUTION

We are offering on a best efforts basis up to [•] Units, at an assumed offering price of \$[•] per Unit, for gross proceeds of up to \$[•] million, before deduction of placement agent fees and offering expenses.

Because this is a best efforts offering, the placement agents do not have an obligation to purchase any securities. We expect that the offering will end two trading days after we first enter into a securities purchase agreement relating to the offering and the offering will settle delivery versus payment (“DVP”)/receipt versus payment (“RVP”). Accordingly, we and the placement agents have not made any arrangements to place investor funds in an escrow account or trust account since the placement agents will not receive investor funds in connection with the sale of the securities offered hereunder.

Pursuant to a placement agency agreement, we have engaged Lake Street Capital Markets, LLC (“Lake Street”) and Maxim Group LLC (“Maxim”) to act as the placement agents (the “placement agents”) to solicit offers to purchase the securities offered by this prospectus. The placement agents are not purchasing or selling any securities, nor are they required to arrange for the purchase and sale of any specific number or dollar amount of securities, other than to use their “reasonable best efforts” to arrange for the sale of the securities by us. Therefore, we may not sell the entire amount of securities being offered. There is no minimum amount of proceeds that is a condition to closing of this offering. We will enter into a securities purchase agreement directly with the investors, at the investor’s option, who purchase our securities in this offering. Investors who do not enter into a securities purchase agreement shall rely solely on this prospectus in connection with the purchase of our securities in this offering. The placement agents may engage one or more subagents or selected dealers in connection with this offering.

The placement agency agreement provides that the placement agents’ obligations are subject to conditions contained in the placement agency agreement.

We will deliver the securities being issued to the investors upon receipt of investor funds for the purchase of the securities offered pursuant to this prospectus.

Placement Agent Fees, Commissions and Expenses

Upon the closing of this offering, we will pay the placement agents a cash transaction fee equal to 8.0% of the aggregate gross cash proceeds to us from the sale of the securities in the offering. Pursuant to the placement agency agreement, we will agree to reimburse the placement agents for certain out-of-pocket expenses of the placement agents payable by us, in an aggregate amount not to exceed \$100,000. The placement agency agreement, however, will provide that in the event this offering is terminated, the placement agents will only be entitled to the reimbursement of out-of-pocket accountable expenses actually incurred in accordance with Financial Industry Regulatory Authority, Inc. (“FINRA”) Rule 5110(f)(2)(C).

The following table shows the public offering price, placement agents’ fees and proceeds, before expenses, to us.

	Per Unit	Total
Public offering price	\$	\$
Placement agents’ fees (8.0%)	\$	\$
Proceeds, before expenses, to us	\$	\$

We estimate that the total expenses of the offering, including registration, filing and listing fees, printing fees and legal and accounting expenses, but excluding the placement agents’ commission, will be approximately \$[•], all of which are payable by us. This figure includes, among other things, the placement agents’ fees and expenses (including the legal fees, costs and expenses for the Placement Agent’s legal counsel) up to \$100,000.

Determination of Offering Price

Our common stock is currently traded on the Nasdaq Capital Market under the ticker symbol “NUWE.” On September [•], 2023, the closing price of our common stock was \$[•] per share.

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The public offering price of the Units offered by this prospectus were negotiated between us, the placement agents and the investors in the offering based on the trading of our shares of common stock prior to the offering, among other things. Among the other factors that were considered in determining the public offering price of the Units:

- our history and our prospects;
- the industry in which we operate;
- our past and present operating results;
- the previous experience of our executive officers; and
- the general condition of the securities markets at the time of this offering.

Lock-Up Agreements

We have agreed with the placement agents not to, subject to certain exceptions, (i) offer, pledge, issue, sell, contract to sell, lend or otherwise transfer or dispose of, directly or indirectly, any shares of our common stock or any securities convertible into or exercisable or exchangeable for our common stock; (ii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of shares of our common stock; or (iii) file any registration statement with the SEC relating to this offering of any shares of our common stock or any securities convertible into or exercisable or exchangeable for shares of our common stock, other than with respect to the registration of shares of our common stock to be issued under an equity incentive plan, without the prior written consent of the placement agents for a period of 90 days following the date of this prospectus (the “Lock-Up Period”). This consent may be given at any time. These restrictions on future issuances are subject to exceptions for (i) the filing by the Company of a registration statement on Form S-4 or a registration statement on Form S-8 or a successor form thereto with respect to securities pursuant to any stock option, stock bonus or other stock plan or arrangement or the proposal or authorization of any increase in the Company’s authorized capital stock, (ii) the issuance of securities sold in this offering, and the issuance of securities upon the conversion or exercise of securities sold in this offering, (iii) the issuance of shares of our common stock upon the exercise of outstanding options or warrants or the vesting of outstanding restricted stock units, (iv) the issuance of employee stock options not exercisable during the Lock-Up Period and the grant or forfeiture of restricted stock awards or restricted stock units pursuant to our equity incentive plans or other arrangements described in this prospectus or the documents incorporated by reference herein and (v) the issuance of securities issued pursuant to certain acquisitions or strategic transactions not primarily for the purpose of raising capital.

In addition, our directors and executive officers have entered into lock-up agreements with the placement agents. Under these agreements, these individuals have agreed, subject to certain specified exceptions, not to sell or transfer any shares of common stock or securities convertible into or exchangeable or exercisable for our shares of common stock during the Lock-Up Period, without first obtaining the written consent of the placement agents. Specifically, these individuals have agreed, in part, not to:

- (1) offer, pledge, announce the intention to sell, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, make any short sale or otherwise transfer or dispose of, directly or indirectly, any shares of our common stock or any securities convertible into or exercisable or exchangeable for shares of our common stock (including without limitation, our common stock which may be deemed to be beneficially owned by the undersigned in accordance with the rules and regulations of the SEC and securities which may be issued upon exercise of a stock option or warrant), whether now owned or hereafter acquired (the “Undersigned’s Securities”);
- (2) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the Undersigned’s Securities;
whether any such transaction described in clause (1) or (2) above is to be settled by delivery of our common stock or such other securities, in cash or otherwise;
- (3) make any demand for or exercise any right with respect to the registration of any shares of our common stock or any security convertible into or exercisable or exchangeable for our common stock; or
- (4) publicly announce or disclose the intention to do any of the foregoing.

Other Relationships

The Placement Agents and their affiliates may in the future provide various investment banking and other financial services for us and our affiliates for which they may in the future receive customary fees.

Common Stock Listing

Our common stock is currently listed on The Nasdaq Capital Market under the symbol “NUWE.” We do not intend to list the warrants or preferred stock to be sold in this offering on any stock exchange or other trading market.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Equiniti Trust Company, LLC.

Electronic Offer, Sale and Distribution of Shares

This registration statement may be made available in electronic format on websites or through other online services maintained by the placement agents, or their affiliates. Other than this registration statement in electronic format, the information on any placement agent’s websites and any information contained in any other websites maintained by the placement agents are not part of this prospectus or the registration statement of which this prospectus forms a part, has not been approved and/or endorsed by us or either placement agent, and should not be relied upon by investors.

Indemnification

We have agreed to indemnify the placement agents against certain liabilities, including certain liabilities arising under the Securities Act or to contribute to payments that the placement agents may be required to make for these liabilities.

Regulation M

The placement agents may be deemed to be an underwriter within the meaning of Section 2(a)(11) of the Securities Act, and any commissions received by them and any profit realized on the resale of the securities sold by them while acting as principal may be deemed to be underwriting discounts or commissions under the Securities Act. As underwriter, the placement agents would be required to comply with the requirements of the Securities Act and the Exchange Act, including, without limitation, Rule 10b-5 and Regulation M under the Exchange Act. These rules and regulations may limit the timing of purchases and sales of our securities by the placement agents acting as principal. Under these rules and regulations, the placement agents (i) may not engage in any stabilization activity in connection with our securities and (ii) may not bid for or purchase any of our securities or attempt to induce any person to purchase any of our securities, other than as permitted under the Exchange Act, until they have completed their participation in the distribution.

Offer Restrictions Outside the United States

Other than in the United States, no action has been taken by us or the Placement Agent that would permit a public offering of the securities offered by this prospectus in any jurisdiction where action for that purpose is required. The securities offered by this prospectus may not be offered or sold, directly or indirectly, nor may this prospectus or any other offering material or advertisements in connection with the offer and sale of any such securities be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons into whose possession this prospectus comes are advised to inform themselves about and to observe any restrictions relating to this offering and the distribution of this prospectus. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any securities offered by this prospectus in any jurisdiction in which such an offer or a solicitation is unlawful.

Selling Restrictions

Notice to prospective investors in the United Kingdom

In relation to the United Kingdom, no securities have been offered or will be offered to the public in the United Kingdom prior to the publication of a prospectus in relation to the securities which has been approved by the competent authority in the United Kingdom, except that offers of securities may be made to the public in the United Kingdom at any time under the following exemptions under the Prospectus Regulation:

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- i. to any legal entity which is a qualified investor as defined under the Prospectus Regulation;
- ii. to fewer than 150 natural or legal persons (other than qualified investors as defined in the Prospectus Regulation), subject to obtaining the prior consent of the placement agents; or
- iii. in any other circumstances falling within Article 1(4) of the Prospectus Regulation;

provided that no such offer of shares shall require the issuer or any placement agent to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or supplement a prospectus pursuant to Article 23 of the Prospectus Regulation and each person who initially acquires any securities or to whom any offer is made will be deemed to have represented, acknowledged and agreed to and with each of the placement agents and us that it is a “qualified investor” within the meaning of Article 2(e) of the Prospectus Regulation. In the case of any securities being offered to a financial intermediary as that term is used in the Prospectus Regulation, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the securities acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer of any securities to the public other than their offer or resale in the United Kingdom to qualified investors as so defined or in circumstances in which the prior consent of the placement agents have been obtained to each such proposed offer or resale.

For the purposes of this provision, the expression an “offer to the public” in relation to any securities in the United Kingdom means the communication in any form and by any means of sufficient information on the terms of the offer and any securities to be offered so as to enable an investor to decide to purchase or subscribe for any securities, and the expression “Prospectus Regulation” means Regulation (EU) 2017/1129. References to the Prospectus Regulation includes, in relation to the United Kingdom, the Prospectus Regulation as it forms part of United Kingdom domestic law by virtue of the European Union (Withdrawal) Act 2018.

In addition, in the United Kingdom, this prospectus is being distributed only to, and is directed only at, and any offer subsequently made may only be directed at persons who are “qualified investors” (as defined in the Prospectus Regulation) (i) who have professional experience in matters relating to investments falling within Article 19 (5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended, or the Order and/or (ii) who are high net worth companies (or persons to whom it may otherwise be lawfully communicated) falling within Article 49(2)(a) to (d) of the Order, all such persons together being referred to as “relevant persons” or otherwise in circumstances which have not resulted and will not result in an offer to the public of the securities in the United Kingdom within the meaning of the Financial Services and Markets Act 2000.

Any person in the United Kingdom that is not a relevant person should not act or rely on the information included in this prospectus or use it as basis for taking any action. In the United Kingdom, any investment or investment activity that this prospectus relates to may be made or taken exclusively by relevant persons.

Notice to prospective investors in Canada

The securities may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the securities must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser’s province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser’s province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

Notice to prospective investors in Australia

This prospectus:

- does not constitute a disclosure document or a prospectus under Chapter 6D.2 of the Corporations Act 2001 (Cth), or the Corporations Act;
- has not been, and will not be, lodged with the Australian Securities and Investments Commission, or ASIC, as a disclosure document for the purposes of the Corporations Act and does not purport to include the information required of a disclosure document for the purposes of the Corporations Act; and
- may only be provided in Australia to select investors who are able to demonstrate that they fall within one or more of the categories of investors, available under section 708 of the Corporations Act, or the Exempt Investors.

The securities may not be directly or indirectly offered for subscription or purchased or sold, and no invitations to subscribe for or buy the securities may be issued, and no draft or definitive offering memorandum, advertisement or other offering material relating to any securities may be distributed in Australia, except where disclosure to investors is not required under Chapter 6D of the Corporations Act or is otherwise in compliance with all applicable Australian laws and regulations. By submitting an application for the securities, you represent and warrant to us that you are an Exempt Investor.

As any offer of securities under this prospectus will be made without disclosure in Australia under Chapter 6D.2 of the Corporations Act, the offer of those securities for resale in Australia within 12 months may, under section 707 of the Corporations Act, require disclosure to investors under Chapter 6D.2 if none of the exemptions in section 708 applies to that resale. By applying for the securities, you undertake to us that you will not, for a period of 12 months from the date of issue of the securities, offer, transfer, assign or otherwise alienate those securities to investors in Australia except in circumstances where disclosure to investors is not required under Chapter 6D.2 of the Corporations Act or where a compliant disclosure document is prepared and lodged with ASIC.

Notice to prospective investors in the British Virgin Islands

The securities are not being, and may not be offered to the public or to any person in the British Virgin Islands for purchase or subscription by or on behalf of us. The securities may be offered to companies incorporated under the BVI Business Companies Act, 2004 (British Virgin Islands), or BVI Companies, but only where the offer will be made to, and received by, the relevant BVI Company entirely outside of the British Virgin Islands. This prospectus has not been, and will not be, registered with the Financial Services Commission of the British Virgin Islands. No registered prospectus has been or will be prepared in respect of the securities for the purposes of the Securities and Investment Business Act, 2010 or the Public Issuers Code of the British Virgin Islands.

Notice to prospective investors in Israel

In the State of Israel, this prospectus shall not be regarded as an offer to the public to purchase the securities under the Israeli Securities Law, 5728-1968, which requires a prospectus to be published and authorized by the Israel Securities Authority, if it complies with certain provisions of Section 15 of the Israeli Securities Law, 5728-1968, including, inter alia, if: (i) the offer is made, distributed or directed to not more than 35 investors, subject to certain conditions, or the Addressed Investors; or (ii) the offer is made, distributed or directed to certain qualified investors defined in the First Addendum of the Israeli Securities Law, 5728-1968, subject to certain conditions, or the Qualified Investors. The Qualified Investors shall not be taken into account in the count of the Addressed Investors and may be offered to purchase securities in addition to the 35 Addressed Investors. The company has not and will not take any action that would require it to publish a prospectus in accordance with and subject to the Israeli Securities Law, 5728-1968. We have not and will not distribute this prospectus or make, distribute or direct an offer to subscribe for the securities to any person within the State of Israel, other than to Qualified Investors and up to 35 Addressed Investors. Qualified Investors may have to submit written evidence that they meet the definitions set out in of the First Addendum to the Israeli Securities Law, 5728-1968. In particular, we may request, as a condition to be offered common stock, that Qualified Investors will each represent, warrant and certify to us and/or to anyone acting on our behalf: (i) that it is an

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investor falling within one of the categories listed in the First Addendum to the Israeli Securities Law, 5728-1968; (ii) which of the categories listed in the First Addendum to the Israeli Securities Law, 5728-1968 regarding Qualified Investors is applicable to it; (iii) that it will abide by all provisions set forth in the Israeli Securities Law, 5728-1968 and the regulations promulgated thereunder in connection with the offer of the securities; (iv) that the securities that it will be issued are, subject to exemptions available under the Israeli Securities Law, 5728-1968: (a) for its own account; (b) for investment purposes only; and (c) not issued with a view to resale within the State of Israel, other than in accordance with the provisions of the Israeli Securities Law, 5728-1968; and (v) that it is willing to provide further evidence of its Qualified Investor status. Addressed Investors may have to submit written evidence in respect of their identity and may have to sign and submit a declaration containing, inter alia, the Addressed Investor's name, address and passport number or Israeli identification number.

LEGAL MATTERS

Honigman LLP, Kalamazoo, Michigan, will issue a legal opinion as to the validity of the securities offered by this prospectus. Sullivan & Worcester, LLP, New York, New York, is acting as counsel to the placement agents in connection with certain legal matters related to this offering.

EXPERTS

Baker Tilly US, LLP, our independent registered public accounting firm, has audited our consolidated financial statements as of and for the years ended December 31, 2022 and 2021 included in our [Annual Report on Form 10-K](#) for the year ended December 31, 2022, which are incorporated by reference into this prospectus and elsewhere in the registration statement, and are included in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We file reports, proxy statements and other information with the SEC in accordance with the Exchange Act. Our reports, proxy statements and other information filed with the SEC are available free of charge to the public over the Internet at the SEC's website at <http://www.sec.gov>. These documents may also be accessed on our website at www.nuwellis.com. Information contained in, or accessible through, our website is not a part of this prospectus.

INFORMATION INCORPORATED BY REFERENCE

SEC rules allow us to “incorporate by reference” into this prospectus much of the information we file with the SEC, which means that we can disclose important information to you by referring you to those publicly available documents. The information that we incorporate by reference into this prospectus, including the consolidated financial statements, is considered to be part of this prospectus. These documents may include Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, as well as proxy statements. You should read the information incorporated by reference because it is an important part of this prospectus.

This prospectus incorporates by reference the documents listed below, other than those documents or the portions of those documents deemed to be furnished and not filed in accordance with SEC rules:

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2022, filed with the SEC on [March 3, 2023](#);
- our Quarterly Reports on Form 10-Q for the quarter ended March 31, 2023, filed with the SEC on [May 9, 2023](#); and for the quarter ended June 30, 2023, filed with the SEC on [August 8, 2023](#);
- our Current Reports on Form 8-K filed with the SEC on [January 5, 2023](#), [January 18, 2023](#), [March 1, 2023](#), [May 22, 2023](#), [June 5, 2023](#), [June 21, 2023](#), [August 8, 2023](#), and [August 18, 2023](#);
- the information specifically incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2022 from our definitive proxy statement for the annual meeting of stockholders held on May 19, 2023, filed with the SEC on [April 7, 2023](#);
- our definitive proxy statement for the annual meeting of stockholders held on May 19, 2023, filed with the SEC on [April 7, 2023](#);
- the description of our common stock in our registration statement on Form 10 filed with the SEC on [September 30, 2011](#), including any amendment or report filed for the purpose of updating such description; and
- the description of our Series A Junior Participating Preferred Stock, par value \$0.0001 per share, in our registration statement on Form 8-A filed with the SEC on [June 14, 2013](#).

All documents we file with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, except as to any portion of any report or document that is not deemed filed under such provisions, (i) on or after the date of filing of the registration statement containing this prospectus and prior to the effectiveness of the registration statement and (ii) on or after the date of this prospectus until the earlier of the date on which all of the securities registered hereunder have been sold or this prospectus has been withdrawn, shall be deemed incorporated by reference in this prospectus and to be a part of this prospectus from the date of filing of those documents. The information in documents that we file in the future will update and supersede the information currently included and incorporated by reference in this prospectus. Nothing in this prospectus shall be deemed to incorporate information furnished but not filed with the SEC pursuant to Item 2.02 or 7.01 of Form 8-K.

These documents may also be accessed on our website at <https://www.nuwellis.com/>. Information contained in, or accessible through, our website is not a part of this prospectus.

We will provide without charge to each person, including any beneficial owners, to whom this prospectus is delivered, upon his or her written or oral request, a copy of any or all reports or documents referred to above which have been or may be incorporated by reference into this prospectus but not delivered with this prospectus, excluding exhibits to those reports or documents unless they are specifically incorporated by reference into those documents. You may request a copy of these documents by writing or telephoning us at the following address:

Nuwellis, Inc.
12988 Valley View Road
Eden Prairie, Minnesota 55344
(952) 345-4200
ir@nuwellis.com
Attention: Robert B. Scott
Chief Financial Officer

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth the estimated costs and expenses, other than placement agent fees and commissions, to be incurred in connection with the issuance and distribution of the securities registered under this Registration Statement. All amounts are estimates except the Securities and Exchange Commission registration fee and the FINRA filing fee.

	Amount to be Paid
SEC registration fee	\$*
FINRA filing fee	*
Legal fees and expenses	*
Printing expenses	*
Accountant's fees and expenses	*
Warrant agent fees	*
Transfer agent and registrar fees	*
Miscellaneous fees and expenses	*
Total	\$*

* To be filed by amendment.

Item 14. Indemnification of Directors and Officers.

Our certificate of incorporation and bylaws provide that each person who was or is made a party or is threatened to be made a party to or is otherwise involved (including, without limitation, as a witness) in any 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 an officer of Nuwellis, Inc. or is or was serving at our request as a director, officer, or trustee of another corporation, or of a partnership, joint venture, trust or other enterprise, including service with respect to an employee benefit plan, whether the basis of such proceeding is alleged action in an official capacity as a director, officer or trustee or in any other capacity while serving as a director, officer or trustee, shall be indemnified and held harmless by us to the fullest extent authorized by the Delaware General Corporation Law, as amended (the "DGCL"), against all expense, liability and loss (including attorneys' fees, judgments, fines, ERISA excise taxes or penalties and amounts paid in settlement) reasonably incurred or suffered by such.

Section 145 of the DGCL permits a corporation to indemnify any director or officer of the corporation against expenses (including attorney's fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with any action, suit or proceeding brought by reason of the fact that such person is or was a director or officer of the corporation, if such person acted in good faith and in a manner that he or she reasonably believed to be in, or not opposed to, the best interests of the corporation, and, with respect to any criminal action or proceeding, if he or she had no reason to believe his or her conduct was unlawful. In a derivative action, (i.e., one brought by or on behalf of the corporation), indemnification may be provided only for expenses actually and reasonably incurred by any director or officer in connection with the defense or settlement of such an action or suit if such person acted in good faith and in a manner that he or she reasonably believed to be in, or not opposed to, the best interests of the corporation, except that no indemnification shall be provided if such person shall have been adjudged to be liable to the corporation, unless and only to the extent that the court in which the action or suit was brought shall determine that the defendant is fairly and reasonably entitled to indemnity for such expenses despite such adjudication of liability.

Pursuant to Section 102(b)(7) of the DGCL, our certificate of incorporation eliminates the liability of a director to us or our stockholders for monetary damages for such a breach of fiduciary duty as a director, except for liabilities arising:

- from any breach of the director's duty of loyalty to us or our stockholders;
- from acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law;
- under Section 174 of the DGCL; and
- from any transaction from which the director derived an improper personal benefit.

We carry insurance policies insuring our directors and officers against certain liabilities that they may incur in their capacities as directors and officers.

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The Company has entered into indemnification agreements with each of its directors and executive officers. Pursuant to the indemnification agreements, the Company agrees to hold harmless and indemnify its directors and executive officers to the fullest extent authorized or permitted by the provisions of the Company's certificate of incorporation and bylaws and the DGCL, including for any amounts that such director or officer becomes obligated to pay because of any claim to which such director or officer is made or threatened to be made a party, witness or participant, by reason of such director's or officer's service as a director, officer, employee or other agent of the Company.

There are certain exceptions from the Company's obligation to indemnify its directors and executive officers pursuant to the indemnification agreements, including for "short-swing" profit claims under Section 16(b) of the Exchange Act, losses that result from conduct that is established by a final judgment as knowingly fraudulent or deliberately dishonest or that constituted willful misconduct, or that constituted a breach of the duty of loyalty to the Company or resulted in any improper personal profit or advantage, where payment is actually made to a director or officer under an insurance policy, indemnity clause, bylaw or agreement, except in respect of any excess beyond payment under such insurance, clause, bylaw or agreement, for indemnification which is not lawful, or in connection with any proceeding initiated by such director or officer, or any proceeding against the Company or its directors, officers, employees or other agents, unless (i) such indemnification is expressly required to be made by law, (ii) the proceeding was authorized by the board of directors of the Company, (iii) such indemnification is provided by the Company, in its sole discretion, pursuant to the powers vested in the Company under the DGCL, or (iv) the proceeding is initiated to enforce a claim for indemnification pursuant to the indemnification agreement.

All agreements and obligations of the Company contained in the indemnification agreements shall continue during the period when the director or officer who is a party to an indemnification agreement is a director, officer, employee or other agent of the Company (or is or is serving at the request of the Company as a director, officer, employee or other agent of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise) and shall continue thereafter so long as such director or officer shall be subject to any possible claim or threatened, pending or completed action, suit or proceeding, whether civil, criminal, arbitrational, administrative or investigative. In addition, the indemnification agreements provide for partial indemnification and advance of expenses.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers or controlling persons pursuant to the foregoing provisions, or otherwise, we have been advised that in the opinion of the Securities and Exchange Commission this indemnification is against public policy as expressed in the Securities Act, and is, therefore, unenforceable.

Item 15. Recent Sales of Unregistered Securities.

The following sets forth information regarding all unregistered securities sold by the registrant in the three years preceding the date of this registration statement. This information has been retroactively adjusted to reflect the reverse stock splits for all periods presented.

- On June 19, 2023, the registrant granted a warrant to DaVita, Inc. ("DaVita"), pursuant to a Supply and Collaboration Agreement ("Supply Agreement") dated as of June 19, 2023, pursuant to which DaVita will pilot the Aquadex ultrafiltration therapy system to treat adult patients with congestive heart failure and related conditions within select U.S. markets. The warrant represents the right to purchase up to an aggregate of 1,289,081 shares of common stock of the Company, par value \$0.0001 per share, at an exercise price of \$3.2996 per share, provided that at no time can it be exercised for an amount of shares that would represent greater than 19.9% ownership in the Company (the "DaVita Warrant") subject to certain vesting milestones. The DaVita Warrant is expected to vest in four tranches as follows (i): 25% upon the Company's receipt of notice to extend the Supply Agreement past the initial pilot-term (the "Ultrafiltration Services Approval"); (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 the 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 issuance was made in reliance upon the exemption for transactions by an issuer not involving any public offering under Section 4(a)(2) of the Securities Act and Rule 506 of Regulation D promulgated thereunder.

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Item 16. Exhibits and Financial Statement Schedules

(a) Exhibits

The following exhibits are filed as part of this registration statement:

Exhibit Number	Exhibit Description	Incorporated By Reference			Exhibit Number	Filed 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	001-35312	January 2, 2019	3.1	
3.6	Certificate of Amendment to the Fourth Amended and Restated Certificate of Incorporation	8-K/A	001-35312	October 16, 2020	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	Third Amended and Restated Bylaws	8-K	001-35312	April 27, 2021	3.2	
3.10	Amendment to Third Amended and Restated Bylaws	8-K	001-35312	October 5, 2022	3.1	
3.11	Form of Certificate of Designation of Series A Junior Participating Preferred Stock	8-K	001-35312	June 14, 2013	3.1	
3.12	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	

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Exhibit Number	Exhibit Description	Incorporated By Reference			Exhibit Number	Filed Herewith
		Form	File Number	Date of First Filing		
3.13	Form of Certificate of Designation of Preferences, Rights and Limitations of Series J Convertible Redeemable Preferred Stock*					
4.1	Form of Warrant to Purchase Shares of Common Stock	S-1/A	333-221010	November 17, 2017	4.9	
4.2	Form of Series 1 and Series 2 Warrant to Purchase Shares of Common Stock	S-1/A	333-209102	February 25, 2019	4.10	
4.3	Common Stock Purchase Warrant, dated May 30, 2019, between the Company and Redington, Inc.	10-Q	001-35312	August 8, 2019	4.1	
4.4	Form of Common Stock Purchase Warrant issued pursuant to the Securities Purchase Agreement, dated October 23, 2019, among the Company and the purchasers signatory thereto	8-K	001-35312	October 23, 2019	4.1	
4.5	Form of Common Stock Purchase Warrant issued pursuant to the Securities Purchase Agreement, dated November 4, 2019, among the Company and the purchasers signatory thereto	8-K	001-35312	November 4, 2019	4.1	
4.6	Form of Common Stock Pre-Funded Purchase Warrant issued pursuant to the Securities Purchase Agreement, dated November 4, 2019, among the Company and the purchasers signatory thereto	8-K	001-35312	November 4, 2019	4.2	
4.7	Form of Common Stock Purchase Warrant	S-1/A	333-235385	January 23, 2020	4.15	
4.8	Form of Common Stock Purchase Warrant issued pursuant to the Securities Purchase Agreement, dated March 19, 2020, among the Company and the purchasers identified on the signature pages thereto	8-K	001-35312	March 20, 2020	4.1	

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Exhibit Number	Exhibit Description	Incorporated By Reference			Exhibit Number	Filed Herewith
		Form	File Number	Date of First Filing		
4.9	Form of Common Stock Purchase Warrant issued pursuant to the Securities Purchase Agreement, dated March 30, 2020, among the Company and the purchasers identified on the signature pages thereto	8-K	001-35312	March 30, 2020	4.1	
4.10	Form of Common Stock Purchase Warrant issued pursuant to the Securities Purchase Agreement, dated May 1, 2020, among the Company and the purchasers identified on the signature pages thereto	8-K	001-35312	May 4, 2020	4.1	
4.11	Form of Warrant to Purchase Shares of Common Stock	S-1/A	333-24145	August 17, 2020	4.19	
4.12	Warrant to Purchase Shares of Common Stock	S-1/A	333-267368	October 13, 2022	4.20	
4.13	Form of Warrant to purchase shares of Series J Convertible Preferred Stock*					
4.14	Specimen of Common Stock Certificate	10	001-35312	September 30, 2011	4.1	
4.15	DaVita Inc. Common Stock Warrant Agreement†	8-K	001-35312	June 21, 2023	4.1	
5.1	Opinion of Honigman LLP*					
10.1	Patent License Agreement between Sunshine Heart, Inc. and Gambro UF Solutions, Inc. dated August 5, 2016	8-K	001-35312	August 8, 2016	10.1	
10.2	2013 Non-Employee Directors' Equity Incentive Plan†	14A	001-35312	April 5, 2013	App. A	
10.3	Form of Stock Option Grant Notice and Option Agreement for 2013 Non-Employee Directors' Equity Incentive Plan†	8-K	001-35312	May 29, 2013	10.2	

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Exhibit Number	Exhibit Description	Incorporated By Reference			Exhibit Number	Filed Herewith
		Form	File Number	Date of First Filing		
10.4	Form of Restricted Stock Unit Award Grant Notice and Agreement for 2013 Non-Employee Directors' Equity Incentive Plan†	10-K	001-35312	March 20, 2015	10.11	
10.5	New-Hire Equity Incentive Plan†	10-Q	001-35312	August 8, 2013	10.1	
10.6	First Amendment to New-Hire Equity Incentive Plan†	10-Q	001-35312	November 12, 2013	10.1	
10.7	Second Amendment to New-Hire Equity Incentive Plan†	S-8	333-202904	March 20, 2015	99.12	
10.8	Third Amendment to New-Hire Equity Incentive Plan†	S-8	333-210215	March 15, 2016	99.13	
10.9	Fourth Amendment to New-Hire Equity Incentive Plan†	8-K	001-35312	May 30, 2017	10.4	
10.10	Fifth Amendment to New-Hire Equity Incentive Plan†	8-K	001-35312	January 18, 2018	10.1	
10.11	Sixth Amendment to New-Hire Equity Incentive Plan†	10-Q	001-35312	August 8, 2019	10.2	
10.12	Seventh Amendment to New-Hire Equity Incentive Plan†	8-K	001-35312	December 6, 2019	10.1	
10.13	Eighth Amendment to New-Hire Equity Incentive Plan†	8-K/A	001-35312	February 25, 2021	10.1	
10.14	Form of Stock Option Grant Notice and Option Agreement for New-Hire Equity Incentive Plan†	10-Q	001-35312	November 12, 2013	10.2	
10.15	2017 Equity Incentive Plan†	8-K	001-35312	May 30, 2017	10.1	
10.16	First Amendment to the 2017 Equity Incentive Plan†	14A	001-35312	September 11, 2020	App. A	
10.17	Second Amendment to the 2017 Equity Incentive Plan†	10-K	001-35312	March 3, 2023	10.17	
10.18	Form of Stock Option Grant Notice and Option Agreement for 2017 Equity Incentive Plan†	8-K	001-35312	May 30, 2017	10.2	

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Exhibit Number	Exhibit Description	Incorporated By Reference			Exhibit Number	Filed Herewith
		Form	File Number	Date of First Filing		
10.19	Form of Restricted Stock Unit Grant Notice and Restricted Stock Unit Agreement for 2017 Equity Incentive Plan†	8-K	001-35312	May 30, 2017	10.3	
10.20	Nuwellis, Inc. 2021 Inducement Plan†	8-K	001-35312	May 20, 2021	10.1	
10.21	First Amendment to the 2021 Inducement Plan†	8-K	001-35312	April 21, 2022	10.1	
10.22	Second Amendment to the 2021 Inducement Plan†	8-K	001-35312	March 1, 2023	10.1	
10.23	Form of Stock Option Grant Notice, Option Agreement and Notice of Exercise under the Nuwellis, Inc. 2021 Inducement Plan†	8-K	001-35312	May 20, 2021	10.2	
10.24	Form of Indemnity Agreement for the Company’s executive officers and directors†	10	001-35312	September 30, 2011	10.1	
10.25	Form of Change in Control Agreement for the Company’s executive officers†	10-K	001-35312	March 20, 2015	10.16	
10.26	Non-Employee Director Compensation Policy (effective August 18, 2021)†	10-Q	001-35312	November 10, 2021	10.2	
10.27	Non-Employee Director Compensation Policy (effective January 1, 2023) †	10-K	001-35312	March 3, 2023	10.27	
10.28	Lease Agreement dated October 21, 2011 by and between the Company and Silver Prairie Crossroads, LLC	10	001-35312	December 16, 2011	10.18	
10.29	Second Amendment to Lease, dated as of April 20, 2015, by and between the Company and Capital Partners Industrial Fund I, LLLP dba Prairie Crossroads Business Center	8-K	001-35312	April 23, 2015	10.1	

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Exhibit Number	Exhibit Description	Incorporated By Reference			Exhibit Number	Filed Herewith
		Form	File Number	Date of First Filing		
<u>10.30</u>	Third Amendment to Lease, dated as of August 3, 2018, by and between the Company and Capital Partners Industrial Fund I, LLLP	10-Q	001-35312	November 7, 2018	10.2	
<u>10.31</u>	Fourth Amendment to Lease, dated as of November 18, 2021, by and between the Company and Capital Partners Industrial Fund I, LLLP	8-K	01-35312	November 23, 2021	10.1	
<u>10.32</u>	Warrant Agency Agreement between the Company and American Stock Transfer & Trust Company, LLC dated April 24, 2017	8-K	001-35312	April 25, 2017	10.1	
<u>10.33</u>	Form of Warrant Reprice Agreement	8-K	001-35312	June 29, 2018	10.1	
<u>10.34</u>	Warrant Agency Agreement, dated as of March 12, 2019, between the Company and American Stock Transfer & Trust Company, LLC	8-K	001-35312	March 13, 2019	4.2	
<u>10.35</u>	Underwriting Agreement, dated as of March 8, 2019, by and between the Company and Ladenburg Thalmann & Co. Inc.	8-K	001-35312	March 13, 2019	1.1	
<u>10.36</u>	Form of Employee Proprietary Information, Inventions Assignment and Non-Competition Agreement for the Company's employees, including executive officers†	10-Q	001-35312	May, 9, 2019	10.3	
<u>10.37</u>	Offer Letter, by and between the Company and Nestor Jaramillo, dated April 12, 2019†	10-Q	001-35312	May 9, 2019	10.5	
<u>10.38</u>	Placement Agency Agreement, dated as of October 23, 2019, by and between the Company and Ladenburg Thalmann & Co. Inc.	8-K	001-35312	October 23, 2019	1.1	

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Exhibit Number	Exhibit Description	Incorporated By Reference			Exhibit Number	Filed Herewith
		Form	File Number	Date of First Filing		
10.39	Form of Securities Purchase Agreement, dated as of October 23, 2019, by and among the Company and the purchasers identified on the signature pages thereto	8-K	001-35312	October 23, 2019	10.1	
10.40	Placement Agency Agreement, dated as of November 4, 2019, by and between the Company and Ladenburg Thalmann & Co. Inc.	8-K	001-35312	November 4, 2019	1.1	
10.41	Form of Securities Purchase Agreement, dated as of November 4, 2019, by and among the Company and the purchasers identified on the signature pages thereto	8-K	001-35312	November 4, 2019	10.1	
10.42	Underwriting Agreement dated as of January 24, 2020, by and between the Company and Ladenburg Thalmann & Co. Inc.	8-K	001-35312	January 29, 2020	1.1	
10.43	Warrant Agency Agreement, dated as of January 28, 2020, between the Company and American Stock Transfer & Trust Company, LLC	8-K	001-35312	January 29, 2020	4.2	
10.44	Placement Agency Agreement, dated as of March 19, 2020, by and between the Company and Ladenburg Thalmann & Co. Inc.	8-K	001-35312	March 20, 2020	1.1	
10.45	Form of Securities Purchase Agreement, dated as of March 19, 2020, by and among the Company and the purchasers identified on the signature pages thereto	8-K	001-35312	March 20, 2020	10.1	
10.46	Placement Agency Agreement, dated as of March 30, 2020, by and between the Company and Ladenburg Thalmann & Co. Inc.	8-K	001-35312	March 30, 2020	1.1	
10.47	Form of Securities Purchase Agreement, dated as of March 30, 2020, by and among the Company and the purchasers identified on the signature pages thereto	8-K	001-35312	March 30, 2020	10.1	

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Exhibit Number	Exhibit Description	Incorporated By Reference			Exhibit Number	Filed Herewith
		Form	File Number	Date of First Filing		
10.48	Form of Securities Purchase Agreement, dated as of May 1, 2020, by and among the Company and the purchasers identified on the signature pages thereto	8-K	001-35312	May 4, 2020	10.1	
10.49	Underwriting Agreement, dated as of August 19, 2020, by and between the Company and Ladenburg Thalman & Co. Inc.	8-K	0001-35312	August 21, 2020	1.1	
10.50	Warrant Agency Agreement, dated as of August 21, 2020, between the Company and American Stock Transfer & Trust Company, LLC	8-K	001-35312	August 21, 2020	4.2	
10.51	Executive Employment Agreement, dated January 16, 2021, by and between the Company and Nestor Jaramillo, Jr.†	8-K	001-35312	January 19, 2021	10.1	
10.52	Executive Employment Agreement, dated January 16, 2021, by and between the Company and John L. Erb†	8-K	001-35312	January 19, 2021	10.2	
10.53	Offer Letter by and between the Company and George Montague, effective as of June 28, 2021†	8-K	001-35312	June 22, 2021	10.1	
10.54	Offer letter by and between the Company and Neil P. Ayotte, effective as of June 7, 2021†	10-Q	001-35312	August 12, 2021	10.4	
10.55	Offer Letter by and between the Company and Lynn Blake, effective as of October 19, 2022†	8-K	001-35312	October 5, 2022	10.1	
10.56	First Amendment to Offer Letter between the Company and Lynn Blake†	8-K	001-35312	December 9, 2022	10.1	
10.57	Underwriting Agreement dated September 15, 2021, between the Company and Ladenburg Thalmann & Co. Inc., as the Representative of the several underwriters named in Schedule I thereto	8-K	001-35312	September 17, 2021	1.1	

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Exhibit Number	Exhibit Description	Incorporated By Reference			Exhibit Number	Filed Herewith
		Form	File Number	Date of First Filing		
10.58	Warrant Agency Agreement, dated as of October 18, 2022, between the Company and American Stock Transfer & Trust Company, LLC	8-K	001-35312	October 18, 2022	4.2	
10.59	Leak-Out Agreement	S-1/A	333-267368	September 30, 2022	10.70	
10.60	Underwriting Agreement dated as of October 14, 2022, by and between Nuwellis, Inc. and Ladenburg Thalmann & Co. Inc.	8-K	001-35312	October 18, 2022	1.1	
10.61	License and Distribution Agreement with SeaStar Medical Holding Corporation, dated as of December 27, 2022+	10-K	001-35312	March 3, 2023	10.63	
10.62	Supply and Collaboration Agreement dated as of June 19, 2023 by and between the Company and DaVita Inc. +	8-K	001-35312	June 21, 2023	10.1	
10.63	Registration Rights Agreement dated as of June 19, 2023 by and between the Company and DaVita Inc.	8-K	001-35312	June 21, 2023	10.2	
10.64	Transition Agreement, by and between Lynn Blake and the Company, dated as of August 4, 2023	8-K	001-35312	August 8, 2023	10.1	
10.65	Consulting Agreement, by and between Lynn Blake and the Company, dated as of August 4, 2023	8-K	001-35312	August 8, 2023	10.2	
10.66	Offer Letter, by and between Robert B. Scott and the Company, effective as of September 2, 2023	8-K	001-35312	August 18, 2023	10.1	
10.67	At The Market Offering Agreement, dated as of March 3, 2023, by and between the Company and Ladenburg Thalmann & Co. Inc.	10-K	001-35312	March 3, 2023	1.1	
10.68	Form of Warrant Agency Agreement*					

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Exhibit Number	Exhibit Description	Incorporated By Reference			Exhibit Number	Filed Herewith
		Form	File Number	Date of First Filing		
10.69	Form of Securities Purchase Agreement to be entered into in this Offering*					
10.70	Form of Placement Agency Agreement by and between the Company, Lake Street Capital Markets, LLC and Maxim Group, LLC*					
21.1	List of Subsidiaries	10-K	001-35312	March 3, 2023	21	
23.1	Consent of Baker Tilly US, LLP					X
23.2	Consent of Honigman LLP*					(included in Exhibit 5.1)
24.1	Power of Attorney					X (included on signature page)
107	Filing Fee Table					X

† Indicates management compensatory plan, contract or arrangement.

+ Certain schedules and exhibits have been omitted pursuant to Item 601(a)(5) of Regulation S-K. A copy of any omitted schedule and/or exhibit will be furnished to the SEC upon request. Certain portions of the License and Distribution Agreement, Warrant, and the Supply and Collaboration Agreement have been redacted pursuant to Item 601(a)(6) and 601(b)(10)(iv) of Regulation S-K because the Company customarily and actually treats the redacted information as private or confidential and the omitted information is not material. Copies of the unredacted License and Distribution Agreement, Warrant, and Supply and Collaboration Agreement will be furnished to the SEC upon request.

* To be filed by amendment.

(b) Financial Statement Schedules

All financial statement schedules are omitted because the information required to be set forth therein is not applicable or is included in the consolidated financial statements or related notes incorporated herein by reference.

Item 17. Undertakings.

- (1) The undersigned registrant hereby undertakes:
 - a. That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
 - b. To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
 - c. For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A

and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b) (1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

- d. That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities:

The undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

- (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
 - (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
 - (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
 - (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.
- (2) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.
- (3) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to section 13(a) or section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Eden Prairie, State of Minnesota, on this 20th day of September.

NUWELLIS, INC.

By: /s/ Nestor Jaramillo, Jr.

Nestor Jaramillo, Jr.

Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below, hereby constitutes and appoints Nestor Jaramillo, Jr. and Robert B. Scott, or either of them, his true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments to the registration statement, including post-effective amendments, and to sign any registration statements filed for the same offering covered by this registration statement filed pursuant to Rule 462(b) under the Securities Act of 1933, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, and does hereby grant unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the foregoing, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ John L. Erb</u> John L. Erb	Chairman of the Board	September 20, 2023
<u>/s/ Nestor Jaramillo, Jr.</u> Nestor Jaramillo, Jr.	President, Chief Executive Officer and Director (principal executive officer)	September 20, 2023
<u>/s/ Robert B. Scott</u> Robert B. Scott	Chief Financial Officer (principal financial officer and principal accounting officer)	September 20, 2023
<u>/s/ Maria Rosa Costanzo, M.D.</u> Maria Rosa Costanzo, M.D.	Director	September 20, 2023
<u>/s/ Michael McCormick</u> Michael McCormick	Director	September 20, 2023
<u>/s/ Jon W. Salveson</u> Jon W. Salveson	Director	September 20, 2023
<u>/s/ Gregory Waller</u> Gregory Waller	Director	September 20, 2023

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statements on Form S-1 of Nuwellis, Inc. and subsidiary of our report dated March 3, 2023, relating to the consolidated financial statements of Nuwellis, Inc. and subsidiary in the Annual Report on Form 10-K for the years ended December 31, 2022 and 2021, which includes an explanatory paragraph relating to the Company's ability to continue as a going concern as described in Note 1 to the consolidated financial statements. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ Baker Tilly US, LLP

Minneapolis, Minnesota
September 20, 2023

Calculation of Filing Fee Tables

FORM S-1
(Form Type)NUWELLIS, INC.
(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered Securities

Security Type	Security Class Title	Fee Calculation Rule	Amount Registered	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price(1)(2)	Fee Rate	Amount of Registration Fee
Newly Registered Securities							
Equity	Units, consisting of (i) Series J Convertible Redeemable Preferred Stock, par value \$0.0001 per share, and (ii) Warrants to purchase shares of Series J Convertible Redeemable Preferred Stock ⁽²⁾	Rule 457(o)	—	—	[•]	\$0.00011020	[\$•]
Equity	Shares of Series J Convertible Redeemable Preferred Stock, included as part of the Units	Rule 457(i)	—	—	—	—	—
Equity	Warrants to purchase shares of Series J Convertible Preferred Stock, included as part of the Units	Rule 457(i)	—	—	—	—	—
Equity	Shares of Common Stock, par value \$0.0001 per share, issuable upon conversion of the Series J Convertible Preferred Stock included in the Units	Rule 457(i)	—	—	—	—	—
Equity	Shares of Series J Convertible Redeemable Preferred Stock issuable upon exercise of the Warrants included in the Units	Rule 457(i)	—	—	[\$•]	\$0.00011020	[\$•]
Equity	Shares of Common Stock issuable upon conversion of Series J Convertible Redeemable Preferred Stock issuable upon exercise of the Warrants ⁽³⁾	Rule 457(i)	—	—	—	—	—
Equity	Shares of Series J Convertible Redeemable Preferred Stock issuable as pay in-kind (PIK) dividends ⁽⁴⁾	Rule 457(o)	—	—	—	—	—
Equity	Shares of Common Stock issuable upon conversion of the Series J Convertible Preferred Stock issued as PIK dividends ⁽⁴⁾	Rule 457(i)	—	—	—	—	—
Total Offering Amounts					\$2,000,000	\$0.00011020	\$220.40
Total Fees Previously Paid							—
Total Fee Offset							—
Net Fee Due							\$220.40

- (1) Pursuant to Rule 416 under the Securities Act of 1933, as amended (the “Securities Act”), there are also being registered such indeterminate number of additional securities as may be issued to prevent dilution resulting from stock splits, stock dividends and similar transactions.
- (2) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act.
- (3) No separate registration fee is required for the shares of the Registrant’s common stock, par value \$0.0001 per share (the “Common Stock”), issuable upon conversion of the Series J Convertible Preferred Stock because no additional consideration will be received in connection with the exercise of the conversion privilege.
- (4) No separate registration fee is required for (i) the shares of the Series J Convertible Preferred Stock issuable as stock dividends and (ii) the shares of common stock issuable upon conversion of the Series J Convertible Preferred Stock because no additional consideration will be received by the Registrant in connection with the issuance of the stock dividend or the shares of common stock issuable upon conversion thereof.