UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-3

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

Mersana Therapeutics, Inc.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

04-3562403

(I.R.S. Employer Identification Number)

840 Memorial Drive Cambridge, Massachusetts 02139 (617) 498-0020

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Anna Protopapas
President and Chief Executive Officer
Mersana Therapeutics, Inc.
840 Memorial Drive
Cambridge, Massachusetts 02139
(617) 498-0020

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copy to:

Rosemary G. Reilly, Esq. Craig Hilts, Esq. Wilmer Cutler Pickering Hale and Dorr LLP 60 State Street Boston, Massachusetts 02109 Telephone: (617) 526-6000

Approximate date of commencement of proposed sale to the public: From time to time after this registration statement becomes effective.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box: \Box

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, other than securities offered only in connection with dividend or interest reinvestment plans, 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, please 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. \Box

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box. ⊠

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box. \Box

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	\boxtimes	Smaller reporting company	X
		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. \Box

PROSPECTUS



Common Stock Preferred Stock Warrants Units

We may offer and sell securities from time to time in one or more offerings. This prospectus describes the general terms of these securities and the general manner in which these securities will be offered. We will provide the specific terms of these securities in supplements to this prospectus. The prospectus supplements will also describe the specific manner in which these securities will be offered and may also supplement, update or amend information contained or incorporated by reference in this document. You should read this prospectus and any applicable prospectus supplement, as well as the documents incorporated by reference herein or therein carefully before you invest.

We may offer these securities in amounts, at prices and on terms determined at the time of offering. The securities may be sold directly to you, through agents, or through underwriters and dealers. If agents, underwriters or dealers are used to sell the securities, we will name them and describe their compensation in a prospectus supplement.

Our common stock is listed on The Nasdaq Global Select Market under the symbol "MRSN."

Investing in these securities involves significant risks. See the information included under "Risk Factors" on page $\underline{4}$ of this prospectus and in any accompanying prospectus supplement, and under similar headings in the documents incorporated by reference in this prospectus or any prospectus supplement, for a discussion of the factors you should carefully consider before deciding to purchase these securities.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, which we refer to as the "SEC," utilizing a "shelf" registration process. Under this shelf registration process, we may from time to time sell any combination of the securities described in this prospectus in one or more offerings.

This prospectus provides you with a general description of the securities we may offer. Each time we sell securities, we will provide one or more prospectus supplements that will contain specific information about the terms of the offering. We may also authorize one or more free writing prospectuses to be provided to you that may contain additional information relating to an offering. The prospectus supplement and any related free writing prospectus may also add, update or change information contained in this prospectus or in any documents that we have incorporated by reference into this prospectus and, accordingly, to the extent inconsistent, information in this prospectus is superseded by the information in the prospectus supplement or any related free writing prospectus. You should read both this prospectus and the accompanying prospectus supplement together with the additional information described under the heading "Where You Can Find More Information."

You should rely only on the information contained in or incorporated by reference in this prospectus, any accompanying prospectus supplement or in any related free writing prospectus filed by us with the SEC. We have not authorized anyone to provide you with different information. This prospectus and any accompanying prospectus supplement do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the securities described in this prospectus or such accompanying prospectus supplement or an offer to sell or the solicitation of an offer to buy such securities in any circumstances in which such offer or solicitation is unlawful. You should assume that the information appearing in this prospectus, any prospectus supplement, the documents incorporated by reference and any related free writing prospectus is accurate only as of their respective dates. Our business, financial condition, results of operations and prospects may have changed materially since those dates.

Unless the context otherwise indicates, references in this prospectus to the "Company," "we," "our" and "us" refer, collectively, to Mersana Therapeutics, Inc., a Delaware corporation, and its consolidated subsidiaries.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at http://www.sec.gov. Copies of certain information filed by us with the SEC are also available on our website at https://www.mersana.com/. Our website is not a part of this prospectus and information contained on, or that can be accessed through, our website is not incorporated by reference in this prospectus.

This prospectus is part of a registration statement we filed with the SEC. This prospectus omits some information contained in the registration statement in accordance with SEC rules and regulations. You should review the information and exhibits in the registration statement for further information about us and our consolidated subsidiaries and the securities we are offering. 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 these filings and the exhibits attached thereto. You should review the complete document to evaluate these statements.

INCORPORATION BY REFERENCE

The SEC allows us to incorporate by reference 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 in this prospectus is considered to be part of this prospectus. Because we are incorporating by reference future filings with the SEC, this prospectus is continually updated and those future filings may modify or supersede some of the information included or incorporated in this prospectus. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus or in any document previously incorporated by reference have been modified or superseded. This prospectus incorporates by reference the documents listed below (File No. 001-38129) and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act (in each case, other than those documents or the portions of those documents not deemed to be filed) until the offering of the securities under the registration statement is terminated or completed:

- Annual Report on Form 10-K for the fiscal year ended December 31, 2022, as filed with the SEC on February 28, 2023, including the information specifically incorporated by reference into the Annual Report on Form 10-K from our <u>definitive proxy</u> statement on Schedule 14A for the 2023 Annual Meeting of Stockholders, filed with the SEC on April 28, 2023;
- Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2023, as filed with the SEC on May 9, 2023;
- Current Reports on Form 8-K as filed with the SEC on <u>January 6, 2023</u> (solely for Item 8.01), <u>January 25, 2023</u> (solely for Item 8.01), <u>February 1, 2023</u> (solely for Item 8.01), <u>March 13, 2023</u> (solely for Item 8.01), <u>March 24, 2023</u>, and <u>March 31, 2023</u>; and
- The description of our common stock contained in our <u>Registration Statement on Form 8-A as filed</u> with the <u>SEC on June 23, 2017</u>, as the description therein has been updated and superseded by the description of our capital stock contained in <u>Exhibit 4.3</u> to our Annual Report on Form 10-K for the fiscal year ended December 31, 2022, as filed with the SEC on February 28, 2023, and including any amendments and reports filed for the purpose of updating such description.

You may request a copy of these filings, at no cost, by writing or calling us at the following address or telephone number:

Investor Relations
Mersana Therapeutics, Inc.
840 Memorial Drive
Cambridge, Massachusetts 02139
(617) 498-0020

FORWARD-LOOKING STATEMENTS

This prospectus and the information incorporated by reference in this prospectus contain certain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Exchange Act. Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based on our current beliefs, expectations and assumptions regarding the future of our business, future plans and strategies, our clinical results and other future conditions. The words "aim," "anticipate," "believe," "contemplate," "continue," "could," "estimate," "expect," "goal," "intend," "may," "on track," "plan," "possible," "potential," "predict," "project," "seek," "should," "target," "will," "would" or the negative of these terms or other similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words.

These forward-looking statements include, among other things, statements about:

- the initiation, cost, timing, progress and results of our current and future research and development
 activities, preclinical studies and clinical trials, including the expected timing of reporting of data
 from our ongoing clinical trials;
- the adequacy of our inventory of upifitamab rilsodotin, or UpRi, XMT-1660 and our other product candidates to support our ongoing and planned clinical trials, as well as the outcome of planned manufacturing runs;
- the timing of, and our ability to obtain and maintain, regulatory approvals for our product candidates;
- unmet needs of patients with ovarian cancer, breast cancer and other cancer indications;
- our ability to quickly and efficiently identify and develop additional product candidates;
- our ability to advance any product candidate into, and successfully complete, clinical trials;
- our intellectual property position, including with respect to our trade secrets;
- the potential benefits of strategic collaborations and our ability to enter into selective strategic collaborations;
- our estimates regarding expenses, future revenues, capital requirements, the sufficiency of our current and expected cash resources and our need for additional financing; and
- the potential impact of the ongoing COVID-19 pandemic.

We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. We have included important factors in the cautionary statements included in this prospectus, particularly in the "Risk Factors" section and in the risk factors detailed in Item 1A, "Risk Factors" of our most recent annual report, our quarterly report and our SEC reports filed after this prospectus, that we believe could cause actual results or events to differ materially from the forward-looking statements that we make. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, collaborations, joint ventures or investments we may make.

The forward-looking statements contained herein represent our views as of the date of this prospectus and we do not assume any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law. We anticipate that subsequent events and developments will cause our views to change. You should, therefore, not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this prospectus.

RISK FACTORS

Investing in our securities involves a high degree of risk. You should carefully review the risks and uncertainties described under the heading "Risk Factors" contained in the applicable prospectus supplement and any related free writing prospectus, and under similar headings in our most recent Annual Report on Form 10-K, our most recent Quarterly Report on Form 10-Q and other filings we make with the SEC from time to time that are incorporated by reference into this prospectus, before deciding whether to purchase any of the securities being registered pursuant to the registration statement of which this prospectus is a part. Each of the risk factors could adversely affect our business, results of operations, financial condition and cash flows, as well as adversely affect the value of an investment in our securities, and the occurrence of any of these risks might cause you to lose all or part of your investment. Additional risks not presently known to us or that we currently believe are immaterial may also adversely affect us in the future.

MERSANA THERAPEUTICS, INC.

Overview

We are a clinical-stage biopharmaceutical company focused on developing antibody-drug conjugates, or ADCs, that offer a clinically meaningful benefit for cancer patients with significant unmet need. We have leveraged over 20 years of industry learning in the ADC field to develop three proprietary and differentiated technology platforms that enable us to develop ADCs designed to have improved efficacy, safety and tolerability relative to existing ADCs and other approved therapies.

We believe that our innovative platforms and our proprietary payloads together enable a robust discovery pipeline for us and our collaborators. Our investments in our novel and proprietary auristatin DolaLock payload, as well as our novel and proprietary STING (stimulator of interferon genes) agonist ImmunoLock payload, together with the good manufacturing practices supply chain established for our Dolaflexin, Dolasynthen and Immunosynthen platforms, enable our ability to apply these platforms to new and different targets and antibodies to create new product candidates. We call this our product engine. Our ADCs in preclinical studies and clinical trials include first-in-class molecules that target multiple tumor types with high unmet medical need.

Our goal is to become a leading oncology company by leveraging the potential of our innovative and differentiated ADC platforms and the experience and competencies of our management team to discover and develop promising ADC product candidates and to commercialize cancer therapeutics that address unmet medical needs or provide significant benefits to patients.

Corporate Information

We were incorporated in the state of Delaware in February 2002 as Nanopharma Corp., and we changed our name to Mersana Therapeutics, Inc. in November 2005. Our principal executive offices are located at 840 Memorial Drive, Cambridge, Massachusetts 02139, and our telephone number is (617) 498-0020. Our website address is www.mersana.com. The information contained on, or that can be accessed through, our website is not a part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

USE OF PROCEEDS

We intend to use the net proceeds from the sale of any securities offered under this prospectus for general corporate purposes unless otherwise indicated in the applicable prospectus supplement. General corporate purposes may include the acquisition of companies or businesses, repayment and refinancing of debt, working capital and capital expenditures. We have not determined the amount of net proceeds to be used specifically for such purposes. As a result, management will retain broad discretion over the allocation of the net proceeds of any offering.

DESCRIPTION OF CAPITAL STOCK

The following description of our capital stock is intended as a summary only and therefore is not a complete description of our capital stock. This description is based upon, and is qualified by reference to, our fifth amended and restated certificate of incorporation, as amended, and our second amended and restated bylaws, each as amended from time to time, and by applicable provisions of Delaware corporate law. You should read our fifth amended and restated certificate of incorporation, as amended, and second amended and restated bylaws, which are filed as exhibits to the registration statement of which this prospectus forms a part, for the provisions that are important to you.

Our authorized capital stock consists of 350,000,000 shares of common stock and 25,000,000 shares of preferred stock. As of May 5, 2023, 114,385,810 shares of common stock were outstanding, and no shares of preferred stock were outstanding.

Common Stock

Holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of stockholders and do not have cumulative voting rights. A contested election of directors by our stockholders shall be determined by a plurality of the votes cast by the stockholders entitled to vote on the election; otherwise, a nominee is elected if the votes properly cast for such nominee exceed the votes properly cast against such nominee. Holders of our common stock are entitled to receive any dividends as may be declared by our board of directors, subject to any preferential dividend rights of outstanding preferred stock.

In the event of our liquidation, dissolution or winding up, whether voluntary or involuntary, the holders of common stock are entitled to receive proportionately ratably in proportion to the number of shares held by each such stockholder all assets available for distribution to stockholders after the payment of or provision for all debts and other liabilities and subject to the prior rights of any outstanding preferred stock. Holders of our common stock have no preemptive, subscription, redemption or conversion rights. The rights, preferences and privileges of holders of our common stock are subject to and may be adversely affected by the rights of the holders of shares of any series of preferred stock that we may designate and issue in the future.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Computershare Trust Company, N.A. The transfer agent and registrar's address is 150 Royall Street, Canton, Massachusetts 02021.

Listing

Our common stock is listed on The Nasdaq Global Select Market under the symbol "MRSN."

Preferred Stock

Our board of directors has the discretion to determine the rights, preferences, privileges and restrictions, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences, of each series of preferred stock. It is not possible to state the actual effect of the issuance of any shares of preferred stock upon the rights of the holders of our common stock until the board of directors determines the specific rights of the holders of preferred stock. However, effects of the issuance of preferred stock could include restricting dividends on common stock, diluting the voting power of common stock, impairing the liquidation rights of common stock, and making it more difficult for a third party to acquire us, which could have the effect of discouraging a third party from acquiring, or deterring a third party from paying a premium to acquire, a majority of our outstanding voting stock.

If we offer a specific class or series of preferred stock under this prospectus, we will describe the terms of the preferred stock in the prospectus supplement for such offering and will file a copy of the certificate establishing the terms of the preferred stock with the SEC. To the extent required, this description will include:

• the title and stated value per share;

- the number of shares offered, the liquidation preference per share and the purchase price;
- the dividend rate(s), period(s) and/or payment date(s), or method(s) of calculation for such dividends:
- whether dividends will be cumulative or non-cumulative and, if cumulative, the date from which dividends will accumulate;
- the procedures for any auction and remarketing, if any;
- the provisions for a sinking fund, if any;
- the provisions for redemption, if applicable;
- any listing of the preferred stock on any securities exchange or market;
- whether the preferred stock will be convertible into our common stock, and, if applicable, the conversion price (or how it will be calculated) and conversion period;
- · voting rights, if any, of the preferred stock;
- a discussion of any material U.S. federal income tax considerations applicable to the preferred stock;
- the relative ranking and preferences of the preferred stock as to dividend rights and rights upon liquidation, dissolution or winding up of our affairs; and
- any material limitations on issuance of any class or series of preferred stock ranking senior to or on a
 parity with the series of preferred stock as to dividend rights and rights upon our liquidation,
 dissolution or winding up.

The preferred stock offered by this prospectus, when issued, will not have, or be subject to, any preemptive or similar rights.

Transfer Agent and Registrar. The transfer agent and registrar for the preferred stock will be set forth in the applicable prospectus supplement.

Provisions of Our Certificate of Incorporation and Bylaws and Delaware Law That May Have Anti-Takeover Effects

Section 203 of the Delaware General Corporation Law

We are subject to the provisions of Section 203 of the Delaware General Corporation Law, or the DGCL. In general, Section 203 prohibits a Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a three-year period following the time that this stockholder becomes an interested stockholder, unless the business combination is approved in a prescribed manner. A "business combination" includes, among other things, a merger, asset or stock sale or other transaction resulting in a financial benefit to the interested stockholder. An "interested stockholder" is a person who, together with affiliates and associates, owns, or did own within three years prior to the determination of interested stockholder status, 15% or more of the corporation's voting stock.

Under Section 203, a business combination between a corporation and an interested stockholder is prohibited unless it satisfies one of the following conditions: before the stockholder became interested, the board of directors approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder; upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, shares owned by persons who are directors and also officers, and employee stock plans, in some instances; or at or after the time the stockholder became interested, the business combination was approved by the board of directors of the corporation and authorized at an annual or special meeting of the stockholders by the affirmative vote of at least two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

A Delaware corporation may "opt out" of these provisions with an express provision in its original certificate of incorporation or an express provision in its certificate of incorporation or bylaws resulting

from a stockholders' amendment approved by at least a majority of the outstanding voting shares. We have not opted out of these provisions. As a result, mergers or other takeover or change in control attempts of us may be discouraged or prevented.

Anti-Takeover Effects of Our Fifth Amended and Restated Certificate of Incorporation, as Amended, and Our Second Amended and Restated Bylaws

Our fifth amended and restated certificate of incorporation, as amended, and second amended and restated bylaws contain certain provisions that are intended to enhance the likelihood of continuity and stability in the composition of the board of directors and which may have the effect of delaying, deferring or preventing a future takeover or change in control of the Company unless such takeover or change in control is approved by the board of directors.

These provisions include:

Classified Board. Our fifth amended and restated certificate of incorporation, as amended, provides that our board of directors is divided into three classes of directors, with the classes as nearly equal in number as possible. As a result, approximately one-third of our board of directors will be elected each year. The classification of directors has the effect of making it more difficult for stockholders to change the composition of our board. Our fifth amended and restated certificate of incorporation, as amended, also provides that, subject to any rights of holders of preferred stock to elect additional directors under specified circumstances, the number of directors will be fixed exclusively pursuant to a resolution adopted by our board of directors. Our board of directors currently consists of eight members.

Action by Written Consent; Special Meetings of Stockholders. Our fifth amended and restated certificate of incorporation, as amended, provides that stockholder action can be taken only at an annual or special meeting of stockholders and cannot be taken by written consent in lieu of a meeting. Our fifth amended and restated certificate of incorporation, as amended, and second amended and restated bylaws also provide that, except as otherwise required by law, subject to the rights of the holders of any series of preferred stock, special meetings of the stockholders can only be called pursuant to a resolution adopted by a majority of the total number of directors which we would have if there were no vacancies. Except as described above, stockholders are not permitted to call a special meeting or to require the board of directors to call a special meeting.

Removal of Directors. Our fifth amended and restated certificate of incorporation, as amended, provides that, subject to the rights of the holders of any series of preferred stock, our directors may be removed only for cause by the affirmative vote of at least 75% of the voting power of our outstanding shares of capital stock, voting together as a single class. This requirement of a supermajority vote to remove directors could enable a minority of our stockholders to prevent a change in the composition of our board.

Advance Notice Procedures. Our second amended and restated bylaws establish an advance notice procedure for stockholder proposals to be brought before an annual meeting of our stockholders, including proposed nominations of persons for election to the board of directors. Stockholders at an annual meeting are only able to consider proposals or nominations specified in the notice of meeting or brought before the meeting by or at the direction of the board of directors (or any committee thereof) or by a stockholder who was a stockholder of record on the record date for the meeting, who is entitled to vote at the meeting and who has given our Secretary timely written notice, in proper form, of the stockholder's intention to bring that business before the meeting. Although the second amended and restated bylaws do not give the board of directors the power to approve or disapprove stockholder nominations of candidates or proposals regarding other business to be conducted at a special or annual meeting, the second amended and restated bylaws may have the effect of precluding the conduct of certain business at a meeting if the proper procedures are not followed or may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect its own slate of directors or otherwise attempting to obtain control of the Company.

Supermajority Approval Requirements. The DGCL generally provides that the affirmative vote of a majority of the shares entitled to vote on any matter is required to amend a corporation's certificate of incorporation or bylaws, unless either a corporation's certificate of incorporation or bylaws requires a greater percentage. Our fifth amended and restated certificate of incorporation, as amended, provides that (i) the affirmative vote of holders of at least 75% of the total votes eligible to be cast in the election of directors is required to amend, alter, change or repeal specified provisions of our fifth amended and restated certificate

of incorporation, as amended, and (ii) the affirmative vote of at least 75% of the voting power of the outstanding shares of capital stock of the Company entitled to vote with respect thereto, voting together as a single class, is required to amend, alter, change or repeal our second amended and restated bylaws, with respect to the powers of stockholders entitled to vote with respect thereto. This requirement of a supermajority vote to approve amendments to our fifth amended and restated certificate of incorporation, as amended, and second amended and restated bylaws could enable a minority of our stockholders to exercise veto power over any such amendments.

Authorized but Unissued Shares. Our authorized but unissued shares of common stock and preferred stock are available for future issuance without stockholder approval. These additional shares may be utilized for a variety of corporate purposes, including future public or private offerings to raise additional capital, corporate acquisitions and employee benefit plans. The existence of authorized but unissued shares of common stock and preferred stock could render more difficult or discourage an attempt to obtain control of a majority of our common stock by means of a proxy contest, tender offer, merger or otherwise.

Exclusive Forum. Our fifth amended and restated certificate of incorporation, as amended, requires, to the fullest extent permitted by law, that derivative actions brought in the name of the Company, actions against directors, officers and employees for breach of a fiduciary duty and other similar actions may be brought only in specified courts in the State of Delaware. Although we believe this provision benefits us by providing increased consistency in the application of Delaware law in the types of lawsuits to which it applies, the provision may have the effect of discouraging lawsuits against our directors and officers.

DESCRIPTION OF WARRANTS

We may issue warrants to purchase common stock or preferred stock. We may offer warrants separately or together with one or more additional warrants, common stock, preferred stock, or any combination of those securities in the form of units, as described in the applicable prospectus supplement. If we issue warrants as part of a unit, the accompanying prospectus supplement will specify whether those warrants may be separated from the other securities in the unit prior to the expiration date of the warrants. The applicable prospectus supplement will also describe the following terms of any warrants:

- the specific designation and aggregate number of, and the offering price at which we will issue, the warrants:
- the currency or currency units in which the offering price, if any, and the exercise price are payable;
- the date on which the right to exercise the warrants will begin and the date on which that right will
 expire or, if you may not continuously exercise the warrants throughout that period, the specific date
 or dates on which you may exercise the warrants;
- whether the warrants are to be sold separately or with other securities as parts of units;
- whether the warrants will be issued in definitive or global form or in any combination of these forms, although, in any case, the form of a warrant included in a unit will correspond to the form of the unit and of any security included in that unit;
- any applicable material U.S. federal income tax consequences;
- the identity of the warrant agent for the warrants and of any other depositaries, execution or paying agents, transfer agents, registrars or other agents;
- the proposed listing, if any, of the warrants or any securities purchasable upon exercise of the warrants on any securities exchange;
- the designation and terms of any equity securities purchasable upon exercise of the warrants;
- if applicable, the designation and terms of the preferred stock with which the warrants are issued and the number of warrants issued with each security;
- if applicable, the date from and after which any warrants issued as part of a unit and the related preferred stock or common stock will be separately transferable;
- the number of shares of common stock or preferred stock purchasable upon exercise of a warrant and the price at which those shares may be purchased;
- if applicable, the minimum or maximum amount of the warrants that may be exercised at any one time:
- information with respect to book-entry procedures, if any;
- the anti-dilution provisions of, and other provisions for changes to or adjustment in the exercise price of, the warrants, if any;
- · any redemption or call provisions; and
- any additional terms of the warrants, including terms, procedures and limitations relating to the
 exchange or exercise of the warrants.

DESCRIPTION OF UNITS

We may issue units consisting of one or more of the other securities described in this prospectus in any combination, as described in the applicable prospectus supplement. We may issue units in one or more series, which will be described in the applicable prospectus supplement. The applicable prospectus supplement will also describe the following terms of any units:

- the designation and the terms of the units and of the securities constituting the units, including whether and under what circumstances the securities comprising the units may be traded separately;
- the identity of any unit agent for the units, if applicable, and of any other depositaries, execution or paying agents, transfer agents, registrars or other agents;
- any additional terms of the governing unit agreement, if applicable;
- any additional provisions for the issuance, payment, settlement, transfer or exchange of the units or
 of the common stock, preferred stock, or warrants constituting the units; and
- any applicable material U.S. federal income tax consequences.

FORMS OF SECURITIES

Each unit and warrant will be represented either by a certificate issued in definitive form to a particular investor or by one or more global securities representing the entire issuance of securities. Unless the applicable prospectus supplement provides otherwise, certificated securities in definitive form and global securities will be issued in registered form. Definitive securities name you or your nominee as the owner of the security, and in order to transfer or exchange these securities or to receive payments other than interest or other interim payments, you or your nominee must physically deliver the securities to the registrar, paying agent or other agent, as applicable. Global securities name a depositary or its nominee as the owner of the units or warrants represented by these global securities. The depositary maintains a computerized system that will reflect each investor's beneficial ownership of the securities through an account maintained by the investor with its broker/dealer, bank, trust company or other representative, as we explain more fully below.

Global Securities

We may issue the units and warrants in the form of one or more fully registered global securities that will be deposited with a depositary or its nominee identified in the applicable prospectus supplement and registered in the name of that depositary or nominee. In those cases, one or more global securities will be issued in a denomination or aggregate denominations equal to the portion of the aggregate principal or face amount of the securities to be represented by global securities. Unless and until it is exchanged in whole for securities in definitive registered form, a global security may not be transferred except as a whole by and among the depositary for the global security, the nominees of the depositary or any successors of the depositary or those nominees.

If not described below, any specific terms of the depositary arrangement with respect to any securities to be represented by a global security will be described in the prospectus supplement relating to those securities. We anticipate that the following provisions will apply to all depositary arrangements.

Ownership of beneficial interests in a global security will be limited to persons, called participants, that have accounts with the depositary or persons that may hold interests through participants. Upon the issuance of a global security, the depositary will credit, on its book-entry registration and transfer system, the participants' accounts with the respective principal or face amounts of the securities beneficially owned by the participants. Any dealers, underwriters or agents participating in the distribution of the securities will designate the accounts to be credited. Ownership of beneficial interests in a global security will be shown on, and the transfer of ownership interests will be effected only through, records maintained by the depositary, with respect to interests of participants, and on the records of participants, with respect to interests of persons holding through participants. The laws of some states may require that some purchasers of securities take physical delivery of these securities in definitive form. These laws may impair your ability to own, transfer or pledge beneficial interests in global securities.

So long as the depositary, or its nominee, is the registered owner of a global security, that depositary or its nominee, as the case may be, will be considered the sole owner or holder of the securities represented by the global security for all purposes under the applicable warrant agreement or unit agreement. Except as described below, owners of beneficial interests in a global security will not be entitled to have the securities represented by the global security registered in their names, will not receive or be entitled to receive physical delivery of the securities in definitive form and will not be considered the owners or holders of the securities under the applicable unit agreement or warrant agreement. Accordingly, each person owning a beneficial interest in a global security must rely on the procedures of the depositary for that global security and, if that person is not a participant, on the procedures of the participant through which the person owns its interest, to exercise any rights of a holder under the applicable unit agreement or warrant agreement. We understand that under existing industry practices, if we request any action of holders or if an owner of a beneficial interest in a global security desires to give or take any action that a holder is entitled to give or take under the applicable unit agreement or warrant agreement, the depositary for the global security would authorize the participants holding the relevant beneficial interests to give or take that action, and the participants would authorize beneficial owners owning through them to give or take that action or would otherwise act upon the instructions of beneficial owners holding through them.

Any payments to holders with respect to warrants or units, represented by a global security registered in the name of a depositary or its nominee will be made to the depositary or its nominee, as the case may be, as the registered owner of the global security. None of us, or any warrant agent, unit agent or other agent of ours, or any agent of any warrant agent or unit agent will have any responsibility or liability for any aspect of the records relating to payments made on account of beneficial ownership interests in the global security or for maintaining, supervising or reviewing any records relating to those beneficial ownership interests.

We expect that the depositary for any of the securities represented by a global security, upon receipt of any payment to holders of any distribution of underlying securities or other property on that registered global security, will immediately credit participants' accounts in amounts proportionate to their respective beneficial interests in that global security as shown on the records of the depositary. We also expect that payments by participants to owners of beneficial interests in a global security held through participants will be governed by standing customer instructions and customary practices, as is now the case with the securities held for the accounts of customers or registered in "street name," and will be the responsibility of those participants.

If the depositary for any of the securities represented by a global security is at any time unwilling or unable to continue as depositary or ceases to be a clearing agency registered under the Exchange Act, and a successor depositary registered as a clearing agency under the Exchange Act is not appointed by us within 90 days, we will issue securities in definitive form in exchange for the global security that had been held by the depositary. Any securities issued in definitive form in exchange for a global security will be registered in the name or names that the depositary gives to the relevant warrant agent, unit agent or other relevant agent of ours or theirs. It is expected that the depositary's instructions will be based upon directions received by the depositary from participants with respect to ownership of beneficial interests in the global security that had been held by the depositary.

PLAN OF DISTRIBUTION

We may sell securities:

- to or through underwriters;
- · to or through dealers;
- · through agents;
- · directly to one or more purchasers;
- through a block trade in which the broker or dealer engaged to handle the block trade will attempt to sell the securities as agent, but may position and resell a portion of the block as principal to facilitate the transaction; or
- through a combination of any of these methods of sale.

In addition, we may issue the securities as a dividend or distribution to our existing security holders. This prospectus may be used in connection with any offering of our securities through any of these methods or other methods described in the applicable prospectus supplement.

We may directly solicit offers to purchase securities, or agents may be designated to solicit such offers. We will, in the prospectus supplement relating to such offering, name any agent that could be viewed as an underwriter under the Securities Act, and describe any commissions that we must pay. Any such agent will be acting on a best efforts basis for the period of its appointment or, if indicated in the applicable prospectus supplement, on a firm commitment basis.

The distribution of the securities may be effected from time to time in one or more transactions:

- at a fixed price, or prices, which may be changed from time to time;
- at market prices prevailing at the time of sale;
- · at prices related to such prevailing market prices; or
- · at negotiated prices.

Each prospectus supplement will describe the method of distribution of the securities and any applicable restrictions.

The prospectus supplement with respect to the securities of a particular series will describe the terms of the offering of the securities, including the following:

- the name of the agent or any underwriters;
- the public offering or purchase price and the proceeds we will receive from the sale of the securities;
- · any discounts and commissions to be allowed or re-allowed or paid to the agent or underwriters;
- all other items constituting underwriting compensation;
- any discounts and commissions to be allowed or re-allowed or paid to dealers; and
- any exchanges on which the securities will be listed.

If any underwriters or agents are utilized in the sale of the securities in respect of which this prospectus is delivered, we will enter into an underwriting agreement or other agreement with them at the time of sale to them, and we will set forth in the prospectus supplement relating to such offering the names of the underwriters or agents and the terms of the related agreement with them.

If a dealer is utilized in the sale of the securities in respect of which this prospectus is delivered, we will sell such securities to the dealer, as principal. The dealer may then resell such securities to the public at varying prices to be determined by such dealer at the time of resale.

Remarketing firms, agents, underwriters, dealers and other persons may be entitled under agreements which they may enter into with us to indemnification by us against certain civil liabilities, including liabilities under the Securities Act, and may be customers of, engage in transactions with or perform services for us in the ordinary course of business.

If so indicated in the applicable prospectus supplement, we will authorize underwriters or other persons acting as our agents to solicit offers by certain institutions to purchase securities from us pursuant to delayed delivery contracts providing for payment and delivery on the date stated in the prospectus supplement. Each contract will be for an amount not less than, and the aggregate amount of securities sold pursuant to such contracts shall not be less nor more than, the respective amounts stated in the prospectus supplement. Institutions with whom the contracts, when authorized, may be made include commercial and savings banks, insurance companies, pension funds, investment companies, educational and charitable institutions and other institutions, but shall in all cases be subject to our approval. Delayed delivery contracts will not be subject to any conditions except that:

- the purchase by an institution of the securities covered under that contract shall not at the time of delivery be prohibited under the laws of the jurisdiction to which that institution is subject; and
- if the securities are also being sold to underwriters acting as principals for their own account, the
 underwriters shall have purchased such securities not sold for delayed delivery. The underwriters and
 other persons acting as our agents will not have any responsibility in respect of the validity or
 performance of delayed delivery contracts.

Certain agents, underwriters and dealers, and their associates and affiliates may be customers of, have borrowing relationships with, engage in other transactions with, and/or perform services, including investment banking services, for us or one or more of our respective affiliates in the ordinary course of business.

In order to facilitate the offering of the securities, any underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the securities or any other securities the prices of which may be used to determine payments on such securities. Specifically, any underwriters may overallot in connection with the offering, creating a short position for their own accounts. In addition, to cover overallotments or to stabilize the price of the securities or of any such other securities, the underwriters may bid for, and purchase, the securities or any such other securities in the open market. Finally, in any offering of the securities through a syndicate of underwriters, the underwriting syndicate may reclaim selling concessions allowed to an underwriter or a dealer for distributing the securities in the offering if the syndicate repurchases previously distributed securities in transactions to cover syndicate short positions, in stabilization transactions or otherwise. Any of these activities may stabilize or maintain the market price of the securities above independent market levels. Any such underwriters are not required to engage in these activities and may end any of these activities at any time.

Under Rule 15c6-1 of the Exchange Act, trades in the secondary market generally are required to settle in two business days, unless the parties to any such trade expressly agree otherwise. The applicable prospectus supplement may provide that the original issue date for your securities may be more than two scheduled business days after the trade date for your securities. Accordingly, in such a case, if you wish to trade securities on any date prior to the second business day before the original issue date for your securities, you will be required, by virtue of the fact that your securities initially are expected to settle in more than two scheduled business days after the trade date for your securities, to make alternative settlement arrangements to prevent a failed settlement.

The securities may be new issues of securities and may have no established trading market. The securities may or may not be listed on a national securities exchange. We can make no assurance as to the liquidity of or the existence of trading markets for any of the securities.

LEGAL MATTERS

Unless the applicable prospectus supplement indicates otherwise, the validity of the securities in respect of which this prospectus is being delivered will be passed upon by Wilmer Cutler Pickering Hale and Dorr LLP.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2022, as set forth in their report, which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.



Common Stock
Preferred Stock
Warrants
Units

May 9, 2023

PROSPECTUS

PART II INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following table sets forth the fees and expenses payable by us in connection with the sale of the offered securities being registered hereby, other than underwriting discounts and commissions.

SEC registration fee	\$ (1)
Printing and engraving	(2)
Accounting services	(2)
Legal fees of registrant's counsel	(2)
Transfer agent's and depositary's fees and expenses	(2)
Miscellaneous	(2)
Total	\$ (2)

- (1) Deferred in reliance upon Rules 456(b) and 457(r) under the Securities Act.
- (2) These fees and expenses are calculated based on the securities offered and the number of issuances and accordingly are not estimated at this time and will be reflected in the applicable prospectus supplement.

Item 15. Indemnification of Directors and Officers.

The following summary is qualified in its entirety by reference to the complete Delaware General Corporation Law ("DGCL") and the Fifth Amended and Restated Certificate of Incorporation of the Registrant, as amended ("Certificate") and Second Amended and Restated Bylaws of the Registrant ("Bylaws").

Section 145 of the DGCL provides, generally, that a corporation shall have the power to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding (except actions by or in the right of the corporation) by reason of the fact that such person is or was a director, officer, employee or agent of the corporation against all expenses, judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the corporation and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful. A corporation may similarly indemnify such person for expenses actually and reasonably incurred by such person in connection with the defense or settlement of any action or suit by or in the right of the corporation, provided that such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation, and, in the case of claims, issues and matters as to which such person shall have been adjudged liable to the corporation, provided that a court shall have determined, upon application, that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which such court shall deem proper.

Section 102(b)(7) of the DGCL provides, generally, that our certificate of incorporation may contain a provision eliminating or limiting the personal liability of a director or officer to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, *provided* that such provision may not eliminate or limit the liability of (i) a director or officer for any breach of the director's or officer's duty of loyalty to the corporation or its stockholders, (ii) a director or officer for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) a director under Section 174 of the DGCL, (iv) a director or officer for any transaction from which the director or officer derived an improper personal benefit, or (v) an officer in any action by or in the right of the corporation. No such provision may eliminate or limit the liability of a director or officer for any act or omission occurring prior to the date when such provision became effective. Our Certificate states that our directors shall not

be personally liable to us or to our stockholders for monetary damages for any breach of a fiduciary duty as a director to the fullest extent permitted by Section 102(b)(7) of the DGCL, notwithstanding any provision of law imposing such liability.

Our Bylaws provide that we will indemnify, defend and hold harmless each person who was or is a party or threatened to be made a party to any action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that he or she is or was, or has agreed to become, our director or officer, or is or was serving, or has agreed to serve, at our request as a director, officer, partner, employee, member or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust, nonprofit entity or other enterprise (all such persons being referred to as an Indemnitee), against all liability and loss suffered (including expenses (including attorneys' fees and expenses), judgments, fines and amounts paid in settlement actually and reasonably incurred by such Indemnitee in connection with such action) unless the proceeding to which the Indemnitee is a party is resolved with an adverse judgment against the Indemnitee.

In addition, we have entered into indemnification agreements with our directors and each of our officers. These indemnification agreements provide broader indemnity rights than those provided under the DGCL and our Bylaws. These indemnification agreements are not intended to deny or otherwise limit third-party or derivative suits against us or our directors or officers, but to the extent a director or officer were entitled to indemnity or contribution under the indemnification agreement, the financial burden of a third-party suit would be borne by us, and we would not benefit from derivative recoveries against the director or officer. Such recoveries would accrue to our benefit but would be offset by our obligations to the director or officer under the indemnification agreement.

We maintain directors' and officers' liability insurance for the benefit of our directors and officers.

Item 16. Exhibits.

Exhibit Index

Exhibit No.	Description						
1.1*	Form of Underwriting Agreement						
4.1	Fifth Amended and Restated Certificate of Incorporation, as amended as of June 9, 2022						
	(incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K, File No. 001-38129, filed with the SEC on June 10, 2022)						
4.2	Second Amended and Restated Bylaws (incorporated by reference to Exhibit 3.1 to the						
	Registrant's Current Report on Form 8-K, File No. 001-38129, filed with the SEC on March 31, 2023)						
4.3*	Form of Warrant Agreement						
4.4*	Form of Unit Agreement						
5.1	Opinion of Wilmer Cutler Pickering Hale and Dorr LLP						
23.1	Consent of Ernst & Young LLP, independent registered public accounting firm for the Registrant						
23.2	Consent of Wilmer Cutler Pickering Hale and Dorr LLP (included in Exhibit 5.1)						
24.1	Powers of Attorney (included in the signature pages to the Registration Statement)						
107	Filing Fee Table						

^{*} To be filed by amendment or by a Current Report on Form 8-K.

Item 17. Undertakings.

The undersigned Registrant hereby undertakes:

- (a) (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) to include any prospectus required by Section 10(a)(3) of the Securities Act of 1933, as amended (the "Securities Act");
 - (ii) to reflect in the prospectus any facts or events arising after the effective date of this registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and
 - (iii) to include any material information with respect to the plan of distribution not previously disclosed in this registration statement or any material change to such information in this registration statement;

provided, however, that paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by a Registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), that are incorporated by reference in this registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of this registration statement.

- (2) That, for the purpose of determining any liability under the Securities Act, 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 the time shall be deemed to be the initial *bona fide* offering thereof.
- (3) 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.
- (4) That, for the purpose of determining liability under the Securities Act to any purchaser:
 - each prospectus filed by a Registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
 - (ii) each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof; *provided*, *however*, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by

reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

- (5) That, for the purpose of determining liability of a Registrant under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned Registrant undertakes that in a primary offering of securities of such 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, such 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 such 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 such undersigned Registrant or used or referred to by such undersigned Registrant;
 - (iii) the portion of any other free writing prospectus relating to the offering containing material information about such undersigned Registrant or its securities provided by or on behalf of such undersigned Registrant; and
 - (iv) any other communication that is an offer in the offering made by such undersigned Registrant to the purchaser.
- (6) That, for purposes of determining any liability under the Securities Act:
 - (i) the information omitted from the form of prospectus filed as part of the registration statement in reliance upon Rule 430A and contained in the 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 the registration statement as of the time it was declared effective; and
 - (ii) 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.
- (b) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in this 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.
- (c) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of any Registrant pursuant to the indemnification provisions described herein, or otherwise, each Registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by a Registrant of expenses incurred or paid by a director, officer or controlling person of such 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, such 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 Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Cambridge, Commonwealth of Massachusetts, on May 9, 2023.

Mersana Therapeutics, Inc.

By: /s/ Anna Protopapas

Name: Anna Protopapas

Title: President and Chief Executive Officer

SIGNATURES AND POWER OF ATTORNEY

We, the undersigned officers and directors of Mersana Therapeutics, Inc. hereby severally constitute and appoint Anna Protopapas, Brian DeSchuytner and Alejandra Carvajal, and each of them singly, our true and lawful attorneys-in-fact with full power to any of them, and to each of them singly, to sign for us and in our names in the capacities indicated below the Registration Statement on Form S-3 filed herewith and any and all amendments (including post-effective amendments) to said Registration Statement, and any registration statement filed pursuant to Rule 462 under the Securities Act of 1933, as amended, in connection with said Registration Statement, and to file or cause to be filed the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, and generally to do all such things in our name and on our behalf in our capacities as officers and directors to enable Mersana Therapeutics, Inc. to comply with the provisions of the Securities Act of 1933, as amended, and all requirements of the Securities and Exchange Commission, hereby ratifying and confirming all that said attorneys, and each of them, or their substitute or substitutes, shall 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.

Signature	Title	Date	
/s/ Anna Protopapas Anna Protopapas	President, Chief Executive Officer and Director (Principal Executive Officer)	May 9, 2023	
/s/ Brian DeSchuytner Brian DeSchuytner	Senior Vice President, Chief Financial Officer (Principal Financial Officer)	May 9, 2023	
/s/ Ashish Mandelia Ashish Mandelia	Vice President, Controller (Principal Accounting Officer)	May 9, 2023	
/s/ David Mott David Mott	Chair of the Board	May 9, 2023	
/s/ Lawrence Alleva Lawrence Alleva	—— Director	May 9, 2023	
/s/ Willard H. Dere, M.D. Willard H. Dere, M.D.	—— Director	May 9, 2023	
/s/ Allene M. Diaz Allene M. Diaz	—— Director	May 9, 2023	

Signature	Title	Date
/s/ Andrew A. F. Hack, M.D., Ph.D. Andrew A. F. Hack, M.D., Ph.D.	– Director	May 9, 2023
/s/ Kristen M. Hege, M.D. Kristen M. Hege, M.D.	– Director	May 9, 2023
/s/ Martin Huber, M.D. Martin Huber, M.D.	Director	May 9, 2023

May 9, 2023

Mersana Therapeutics, Inc. 840 Memorial Drive Cambridge, Massachusetts 02139

Re: Registration Statement on Form S-3

Ladies and Gentlemen:

This opinion is furnished to you in connection with a Registration Statement on Form S-3 (the "Registration Statement") to be filed by Mersana Therapeutics, Inc., a Delaware corporation (the "Company"), with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Securities Act"), for the registration of the following securities of the Company (the "Securities"):

- i. common stock, par value \$0.0001 per share ("Common Stock");
- ii. preferred stock, par value \$0.0001 per share ("Preferred Stock");
- iii. warrants to purchase Common Stock or Preferred Stock ("Warrants"); and
- iv. units, consisting of one or more securities, including Common Stock, Preferred Stock, or Warrants ("Units");

all of which may be issued from time to time on a delayed or continuous basis pursuant to Rule 415 under the Securities Act at an indeterminate aggregate offering price, as set forth in the Registration Statement, the base prospectus contained therein (the "Prospectus") and any amendments or supplements thereto.

We are acting as counsel for the Company in connection with the filing of the Registration Statement. The preferences, limitations and relative rights of shares of any series of Preferred Stock will be set forth in a Certificate of Designation (a "Certificate of Designation"). The Warrants may be issued pursuant to a warrant agreement (the "Warrant Agreement") to be entered into between the Company and a bank or trust company to be named, as warrant agent. The Units may be issued pursuant to a Unit Agreement (the "Unit Agreement") to be entered into between the Company and a bank or trust company to be named, as unit agent.

We have examined and relied upon signed copies of the Registration Statement to be filed with the Commission, including the exhibits thereto. We have also examined and relied upon the Fifth Amended and Restated Certificate of Incorporation of the Company (as amended or restated from time to time, the "Certificate of Incorporation"), the Second Amended and Restated Bylaws of the Company (as amended or restated from time to time, the "Bylaws") and minutes of meetings of the stockholders and the Board of Directors of the Company (including duly authorized committees thereof) as provided to us by the Company.

In our examination of the foregoing documents, we have assumed the genuineness of all signatures, the legal capacity of all signatories, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as copies, the authenticity of such original documents and the completeness and accuracy of the corporate minute books of the Company.

We have relied as to certain matters on information obtained from public officials and officers of the Company, and we have assumed (i) the Registration Statement will be effective and will comply with all applicable laws at the time Securities are offered or issued as contemplated by the Registration Statement; (ii) one or more prospectus supplements will have been prepared and filed with the Commission describing the Securities offered thereby; (iii) all Securities will be issued and sold in compliance with applicable federal and state securities laws and in the manner stated in the Registration Statement, the Prospectus and any applicable prospectus supplement; (iv) any Warrant Agreement or Unit Agreement, as applicable, will be duly authorized, executed and delivered by all parties thereto other than the Company; (v) a definitive purchase, underwriting or similar agreement with respect to any Securities offered will be duly authorized, executed and delivered by all parties thereto other than the Company; (vi) any Securities issuable upon conversion, exchange or exercise of any Security being offered will be duly authorized, created and, if appropriate, reserved for issuance upon such conversion, exchange or exercise; (vii) with respect to shares of Common Stock or Preferred Stock offered, there will be sufficient shares of Common Stock or Preferred Stock authorized under the Certificate of Incorporation and not otherwise reserved for issuance; (viii) if issued in certificated form, valid book-entry notations for the issuance of the Common Stock or the Preferred Stock will have been duly made in the share register of the Company; (ix) at the time of the issuance and sale of the Securities, the Company will be validly existing as a corporation and in good standing under the laws of the State of Delaware; and (x) any Warrant Agreement or Unit Agreement will be governed by the laws of the State of New York or Delaware.

We are expressing no opinion herein as to the application of any federal or state law or regulation to the power, authority or competence of any party to any agreement with respect to any of the Securities other than the Company. We have assumed that such agreements are, or will be, the valid and binding obligations of each party thereto other than the Company, and enforceable against each such other party in accordance with their respective terms.

We have assumed for purposes of our opinions below that no authorization, approval or other action by, and no notice to or filing with, any governmental authority or regulatory body or any other third party is required for the due execution, delivery or performance by the Company, or, if any such authorization, approval, consent, action, notice or filing is required, it will have been duly obtained, taken, given or made and will be in full force and effect. We have also assumed that there will not have occurred, prior to the date of issuance of the Securities, any change in law affecting the validity or enforceability of such Securities and that at the time of the issuance and sale of such Securities, the Board of Directors of the Company (or any committee of such Board of Directors or any person acting pursuant to authority properly delegated to such person by the Board of Directors of the Company or any committee of such Board of Directors) shall not have taken any action to rescind or otherwise reduce its prior authorization of the issuance of such Securities.

Our opinions below are qualified to the extent that they may be subject to or affected by (i) applicable bankruptcy, insolvency, reorganization, receivership, moratorium, usury, fraudulent conveyance, fraudulent transfer or similar laws relating to or affecting the rights or remedies of creditors generally, (ii) duties and standards imposed on creditors and parties to contracts, including, without limitation, requirements of materiality, good faith, reasonableness and fair dealing, and (iii) general equitable principles. Furthermore, we express no opinion as to the availability of any equitable or specific remedy upon any breach of any of the agreements as to which we are opining herein, or any of the agreements, documents or obligations referred to therein, or to the successful assertion of any equitable defenses, inasmuch as the availability of such remedies or the success of any equitable defenses may be subject to the discretion of a court. We also express no opinion herein as to the laws of any state or jurisdiction other than the state laws of the State of New York and the General Corporation Law of the State of Delaware. We also express no opinion herein with respect to compliance by the Company with the securities or "blue sky" laws of any state or other jurisdiction of the United States or of any foreign jurisdiction. We express no opinion and make no statement herein with respect to the antifraud laws of any jurisdiction.

We also express no opinion herein as to any provision of any agreement (i) that may be deemed to or construed to waive any right, defense or counterclaim of the Company, (ii) to the effect that rights and remedies are not exclusive, that every right or remedy is cumulative and may be exercised in addition to or with any other right or remedy and does not preclude recourse to one or more other rights or remedies, (iii) relating to the effect of invalidity or unenforceability of any provision of any agreement on the validity or enforceability of any other provision thereof, (iv) that is in violation of public policy, (v) relating to indemnification and contribution with respect to securities law matters, (vi) that provides that the terms of any agreement may not be waived or modified except in writing, (vii) purporting to indemnify any person against his, her or its own negligence or intentional misconduct, (viii) requiring the payment of penalties, consequential damages or liquidated damages or limiting a party's recovery of certain damages or losses, (ix) purporting to establish evidentiary standards or regarding standards for exercising rights and remedies or (x) relating to choice of law or consent to jurisdiction.

Based upon and subject to the foregoing, we are of the opinion that:

1. With respect to shares of Common Stock, when (i) specifically authorized for issuance by proper action of the Board of Directors of the Company or an authorized committee thereof (the "Authorizing Resolutions"), (ii) the terms of the issuance and sale of the Common Stock have been duly established in conformity with the Certificate of Incorporation, Bylaws and Authorizing Resolutions, (iii) the shares of Common Stock have been issued and delivered as contemplated by the Registration Statement, the Prospectus and any applicable Prospectus Supplement in accordance with the applicable underwriting or other purchase agreement or upon conversion or exercise of any Security offered under the Registration Statement against payment therefor, and (iv) the Company has received the consideration provided for in the Authorizing Resolutions and the applicable underwriting agreement or other purchase agreement and such consideration per share is not less than the par value per share of the Common Stock, the Common Stock will be validly issued, fully paid and non-assessable.

- 2. With respect to shares of any series of Preferred Stock, when (i) the Authorizing Resolutions have specifically authorized the issuance and terms of the series, the terms of the offering thereof and related matters, including resolutions establishing and designating the series and fixing and determining the preferences, limitations and relative rights thereof and the filing of a Certificate of Designation with respect to the series with the Secretary of State of the State of Delaware, and such Certificate of Designation has been duly filed, (ii) the terms of the issuance and sale of the series of Preferred Stock have been duly established in conformity with the Certificate of Incorporation, Bylaws and Authorizing Resolutions, (iii) the shares of the series of Preferred Stock have been issued and delivered as contemplated by the Registration Statement, the Prospectus and any applicable Prospectus Supplement in accordance with the applicable underwriting or other purchase agreement against payment therefor, and (iv) the Company has received the consideration provided for in the Authorizing Resolutions and the applicable underwriting agreement or other purchase agreement and such consideration per share is not less than the par value per share of the Preferred Stock, the shares of such series of Preferred Stock will be validly issued, fully paid and non-assessable.
- 3. With respect to the Warrants, when (i) specifically authorized for issuance by the Authorizing Resolutions, (ii) any applicable Warrant Agreement relating to the Warrants has been duly authorized, executed and delivered by the Company, (iii) the terms of the Warrants and of their issuance and sale have been duly established in conformity with any applicable Warrant Agreement and the Authorizing Resolutions, (iv) the Warrants have been duly executed by the Company and countersigned in accordance with any Warrant Agreement and Authorizing Resolutions and issued and delivered as contemplated by the Registration Statement, the Prospectus and any applicable Prospectus Supplement in accordance with the applicable underwriting or other purchase agreement against payment therefor, and (v) the Company has received the consideration provided for in the Authorizing Resolutions and the applicable underwriting agreement or other purchase agreement, such Warrants will constitute valid and binding obligations of the Company enforceable against the Company in accordance with their terms.
- 4. With respect to the Units, when (i) specifically authorized for issuance by Authorizing Resolutions, (ii) any applicable Unit Agreement has been duly authorized, executed and delivered, (iii) the terms of the Units and of their issuance and sale have been duly established in conformity with any applicable Unit Agreement and the Authorizing Resolutions, (iv) the Units have been duly executed and delivered in accordance with any applicable Unit Agreement and issued and delivered as contemplated by the Registration Statement, the Prospectus and any applicable Prospectus Supplement in accordance with the applicable underwriting or other purchase agreement against payment therefor, and (v) the Company has received the consideration provided for in the Authorizing Resolutions and the applicable underwriting agreement or other purchase agreement, such Units will constitute valid and binding obligations of the Company enforceable against the Company in accordance with their terms.

Please note that we are opining only as to the matters expressly set forth herein, and no opinion should be inferred as to any other matters. This opinion is based upon currently existing statutes, rules, regulations and judicial decisions, and we disclaim any obligation to advise you of any change in any of these sources of law or subsequent legal or factual developments which might affect any matters or opinions set forth herein.

We hereby consent to the filing of this opinion with the Commission as an exhibit to the Registration Statement in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act and to the use of our name therein and in the related Prospectus and in any prospectus supplement under the caption "Legal Matters." In giving such consent, we do not hereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission.

Very truly yours,

/s/ Wilmer Cutler Pickering Hale and Dorr LLP

WILMER CUTLER PICKERING HALE AND DORR LLP

Consent of Independent Registered Public Accounting Firm

We consent to the reference to our firm under the caption "Experts" in this Registration Statement (Form S-3) and related Prospectus of Mersana Therapeutics, Inc. for the registration of shares of common stock, preferred stock, units, and warrants and to the incorporation by reference therein of our report dated February 28, 2023, with respect to the consolidated financial statements of Mersana Therapeutics, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2022, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Boston, Massachusetts May 9, 2023

Eiling Foo

Calculation of Filing Fee Tables

Form S-3 (Form Type)

Mersana Therapeutics, Inc.

(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered and Carry Forward Securities

	Security Type	Security Class Title	Fee Calculation or Carry Forward Rule	Amount Registered		Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee		Carry Forward File Number	Carry Forward Initial Effective Date	Filing Fee Previously Paid In Connection with Unsold Securities to be Carried Forward
						sistered Seco						
Fees to Be Paid	. ,	Common Stock, \$0.0001 par value per share		(1)	(1)	(1)	(1)	(1)	_	_	_	_
Fees to Be Paid	Equity	Preferred Stock	(1)	(1)	(1)	(1)	(1)	(1)	_	_	_	_
Fees to Be Paid	Other	Warrants	(1)	(1)	(1)	(1)	(1)	(1)	_	_	_	_
Fees to Be Paid	Other	Units (2)	(1)	(1)	(1)	(1)	(1)	(1)	_	_	_	_
Fees to Be Paid	Unallocated (Universal) Shelf		()	(1)	(1)	\$ (1)	(1)	\$ (1)	_	_	_	_
Fees Previously Paid	_	_	_	_	_	_	_	_	_	_	_	_
					Carry For	rward Secu	rities					
Carry Forward Securities	_	_	_	_	_	_	_	_	_	_	_	_
			Total Offeri			\$ (1)		\$ (1)				
		To	otal Fees Prev					_				
			Total	Fee Offsets								
			1	Net Fee Due				\$ (1)				

- (1) Pursuant to Instruction 2.A(iii)(c) of Item 16(b) of Form S-3, this information is not required to be included. An indeterminate amount of the securities of each identified class is being registered as may from time to time be offered under this registration statement at indeterminate prices, along with an indeterminate number of securities that may be issued upon exercise, settlement, exchange or conversion of securities offered or sold under this registration statement. Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement also covers any additional securities that may be offered or issued in connection with any stock split, stock dividend or pursuant to anti-dilution provisions of any of the securities. Separate consideration may or may not be received for securities that are issuable upon conversion, exercise or exchange of other securities. In accordance with Rule 456(b) and 457(r) under the Securities Act, the registrant is deferring payment of all registration fees. Any subsequent registration fees will be paid on a pay-as-you-go basis.
- (2) Units may be issued under a unit agreement and will represent an interest in one or more securities registered under this registration statement including shares of common stock or preferred stock, debt securities or warrants, in any combination, which may or may not be separable from one another.