

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

**FORM 8-K**

CURRENT REPORT  
Pursuant to Section 13 or 15(d) of The Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): **December 20, 2024**

**MONOPAR THERAPEUTICS INC.**

(Exact name of registrant as specified in its charter)

<u>Delaware</u> (State or other jurisdiction of incorporation)	<u>001-39070</u> (Commission File Number)	<u>32-0463781</u> (I.R.S. Employer Identification No.)
<u>1000 Skokie Blvd., Suite 350, Wilmette, IL</u> (Address of principal executive offices)		<u>60091</u> (Zip Code)

(847) 388-0349

Registrant's telephone number, including area code

N/A

(Former name or former address, if changed since last report)

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

<u>Title of each class</u>	<u>Trading Symbol(s)</u>	<u>Name of each exchange on which registered</u>
<b>Common Stock, \$0.001 par value</b>	<b>MNPR</b>	<b>The Nasdaq Stock Market LLC (Nasdaq Capital Market)</b>

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§ 230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§ 240.12b-2 of this chapter).

Emerging growth company

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

## **Item 1.01. Entry into a Material Definitive Agreement.**

### ***Underwritten Registered Offering***

On December 20, 2024, Monopar Therapeutics Inc., a Delaware corporation (the “**Company**”), entered into an Underwriting Agreement (the “**Underwriting Agreement**”) with Piper Sandler & Co. (the “**Representative**”) as Representative of the several underwriters named therein (together with the Representative, the “**Underwriters**”), pursuant to which the Company will issue and sell to the Underwriters pursuant to the Underwriting Agreement 798,655 shares (the “**Shares**”) of common stock, par value \$0.001 per share (the “**Common Stock**”), at an offering price of \$23.79 per Share (the “**Registered Offering**”).

The Registered Offering is being made pursuant to a shelf registration statement filed December 21, 2022 and declared effective by the Securities and Exchange Commission (the “**SEC**”) on January 4, 2023 (the “**Registration Statement**”) (File. No. 333-268935), a base prospectus filed as part thereof, and a prospectus supplement dated December 20, 2024, filed pursuant to Rule 424(b)(5) under the Securities Act of 1933, as amended (the “**Securities Act**”).

The Underwriting Agreement contains customary representations, warranties and agreements by the Company and the Underwriters, customary conditions to closing, and customary indemnification obligations of the Company.

The Company has agreed to provide the Underwriters with customary indemnification and contribution rights, in connection with entering into the Underwriting Agreement. The Company also agreed to reimburse the Underwriters for certain expenses.

The foregoing description of the Underwriting Agreement is not complete and is qualified in its entirety by reference to the full text of such agreement, a copy of which is filed herewith as Exhibit 1.1 to this Current Report on Form 8-K and is incorporated herein by reference.

The opinion of the Company’s counsel regarding the validity of the Shares to be issued pursuant to the Underwriting Agreement is also filed herewith as Exhibit 5.1.

### ***Concurrent Private Placement of Pre-Funded Warrants***

Also on December 20, 2024, the Company entered into a Securities Purchase Agreement (the “**Securities Purchase Agreement**”) with an institutional and accredited investor (the “**Purchaser**”) pursuant to which the Purchaser agreed to purchase pre-funded warrants to purchase 882,761 shares of Common Stock at a purchase price of \$23.789 per pre-funded warrant, which represents the per share public offering price of the Shares in the Registered Offering less the \$0.001 per share exercise price for each pre-funded warrant (the “**Private Placement**”).

The Securities Purchase Agreement contains customary representations and warranties of the Company, on the one hand, and the Purchasers, on the other hand, and customary conditions to closing. At closing of the transactions contemplated by the Securities Purchase Agreement, the Company will enter into a Registration Rights Agreement (the “**Registration Rights Agreement**”) with the Purchaser, which provides that the Company will register the resale of the shares of Common Stock issuable upon the exercise of the pre-funded warrants. The Company is required to prepare and file a registration statement with the SEC no later than thirty days following the closing of the Private Placement, and to use its commercially reasonable efforts to have the registration statement declared effective as soon as practicable, subject to certain exceptions and specified penalties if timely effectiveness is not achieved.

The pre-funded warrants and underlying shares to be issued and sold to the Purchaser under the Securities Purchase Agreement will not be registered under the Securities Act in reliance on the exemption from registration provided by Section 4(a)(2) of the Securities Act and/or Rule 506 of Regulation D promulgated thereunder. The Company relied on this exemption from registration based in part on representations made by the Purchaser.

The foregoing descriptions of the Securities Purchase Agreement, the Registration Rights Agreement and the pre-funded warrants are not complete and are qualified in their entirety by reference to the full text of the Securities Purchase Agreement, the Registration Rights Agreement and the form of pre-funded warrant, copies of which are filed herewith as Exhibits 10.1, 10.2 and 4.1, respectively, and incorporated herein by reference.

### ***Proceeds from Registered Offering and Private Placement***

The net proceeds to the Company from the Registered Offering and the Private Placement, after deducting underwriting discounts and commissions and estimated offering expenses, are expected to be approximately \$37.6 million. The Registered Offering and the Private Placement are expected to close on December 23, 2024, subject to customary conditions.

## **Item 3.02 Unregistered Sales of Equity Securities**

The information in Item 1.01 above is incorporated herein by reference.

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**Item 9.01 Financial Statements and Exhibits.**

(d) Exhibits.

<b>Exhibit No.</b>	<b>Description</b>
<a href="#">1.1</a>	<a href="#">Underwriting Agreement, dated December 20, 2024, by and among Monopar Therapeutics Inc., Piper Sandler &amp; Co. and the underwriters named therein.</a>
<a href="#">4.1</a>	<a href="#">Form of Pre-Funded Warrant</a>
<a href="#">5.1</a>	<a href="#">Legal Opinion of Baker &amp; Hostetler LLP</a>
<a href="#">10.1</a>	<a href="#">Securities Purchase Agreement, dated December 20, 2024, by and among Monopar Therapeutics Inc. and the Purchaser</a>
<a href="#">10.2</a>	<a href="#">Form of Registration Rights Agreement by and among Monopar Therapeutics Inc. and the Purchaser</a>
<a href="#">23.1</a>	<a href="#">Consent of Baker &amp; Hostetler LLP (contained in Exhibit 5.1).</a>
104	Cover Page Interactive Data File – the cover page XBRL tags are embedded within the Inline XBRL document.

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**SIGNATURE**

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

**Monopar Therapeutics Inc.**

Date: December 23, 2024

By: /s/ Karthik Radhakrishnan

Name: Karthik Radhakrishnan

Title: Chief Financial Officer

**MONOPAR THERAPEUTICS INC.**

(a Delaware corporation)

798,655 Shares of Common Stock

**UNDERWRITING AGREEMENT**

December 20, 2024

Piper Sandler & Co.  
as Representative of the several Underwriters

c/o Piper Sandler & Co.  
U.S. Bancorp Center  
800 Nicollet Mall  
Minneapolis, Minnesota 55402

Ladies and Gentlemen:

Monopar Therapeutics Inc., a Delaware corporation (the "Company"), confirms its agreement with Piper Sandler & Co. ("Piper Sandler") and each of the other Underwriters named in Schedule A hereto (collectively, the "Underwriters," which term shall also include any underwriter substituted as hereinafter provided in Section 10 hereof), for which Piper Sandler is acting as representative (in such capacity, the "Representative"), with respect to (i) the sale by the Company and the purchase by the Underwriters, acting severally and not jointly, of the respective numbers of shares of common stock, par value \$0.001 per share, of the Company ("Common Stock") set forth in Schedule A hereto. The aforesaid 798,655 shares of Common Stock to be purchased by the Underwriters are herein called, collectively, the "Securities."

The Company understands that the Underwriters propose to make a public offering of the Securities as soon as the Representative deems advisable after this Underwriting Agreement (this "Agreement") has been executed and delivered.

The Company has filed with the Securities and Exchange Commission (the "Commission") a shelf registration statement on Form S-3 (No. 333-268935), covering the public offering and sale of certain securities, including the Securities, under the Securities Act of 1933, as amended (the "1933 Act") and the rules and regulations of the Commission promulgated thereunder (the "1933 Act Regulations"), which shelf registration statement was declared effective on January 4, 2023. Such registration statement, as of any time, means such registration statement as amended by any post-effective amendments thereto to such time, including the exhibits and any schedules thereto at such time, the documents incorporated or deemed to be incorporated by reference therein at such time pursuant to Item 12 of Form S-3 under the 1933 Act and the documents otherwise deemed to be a part thereof as of such time pursuant to Rule 430B under the 1933 Act Regulations ("Rule 430B"), is referred to herein as the "Registration Statement;" provided, however, that the "Registration Statement" without reference to a time means such registration statement as amended by any post-effective amendments thereto as of the time of the first contract of sale for the Securities, which time shall be considered the "new effective date" of such registration statement with respect to the Securities within the meaning of paragraph (f)(2) of Rule 430B, including the exhibits and schedules thereto as of such time, the documents incorporated or deemed incorporated by reference therein at such time pursuant to Item 12 of Form S-3 under the 1933 Act and the documents otherwise deemed to be a part thereof as of such time pursuant to the Rule 430B. Any registration statement filed pursuant to Rule 462(b) of the 1933 Act Regulations is herein called the "Rule 462(b) Registration Statement" and, after such filing, the term "Registration Statement" shall include the Rule 462(b) Registration Statement. Each preliminary prospectus used in connection with the offering of the Securities, including the documents incorporated or deemed to be incorporated by reference therein pursuant to Item 12 of Form S-3 under the 1933 Act, are collectively referred to herein as a "preliminary prospectus." Promptly after execution and delivery of this Agreement, the Company will prepare and file a final prospectus relating to the Securities in accordance with the provisions of Rule 424(b) under the 1933 Act Regulations ("Rule 424(b)"). The final prospectus, in the form first furnished or made available to the Underwriters for use in connection with the offering of the Securities, including the documents incorporated or deemed to be incorporated by reference therein pursuant to Item 12 of Form S-3 under the 1933 Act, are collectively referred to herein as the "Prospectus." For purposes of this Agreement, all references to the Registration Statement, any preliminary prospectus, the Prospectus or any amendment or supplement to any of the foregoing shall be deemed to include the copy filed with the Commission pursuant to its Electronic Data Gathering, Analysis and Retrieval system (or any successor system) ("EDGAR").

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As used in this Agreement:

“Applicable Time” means 8:59:00 A.M., New York City time, on December 20, 2024 or such other time as agreed by the Company and the Representative.

“General Disclosure Package” means any Issuer General Use Free Writing Prospectuses issued at or prior to the Applicable Time, the most recent preliminary prospectus (including any documents incorporated therein by reference) that is distributed to investors prior to the Applicable Time and the information included on Schedule B-1 hereto, all considered together.

“Issuer Free Writing Prospectus” means any “issuer free writing prospectus,” as defined in Rule 433 of the 1933 Act Regulations (“Rule 433”), including without limitation any “free writing prospectus” (as defined in Rule 405 of the 1933 Act Regulations (“Rule 405”)) relating to the Securities that is (i) required to be filed with the Commission by the Company, (ii) a “road show for an offering that is a written communication” within the meaning of Rule 433(d)(8)(i), whether or not required to be filed with the Commission, or (iii) exempt from filing with the Commission pursuant to Rule 433(d)(5)(i) because it contains a description of the Securities or of the offering that does not reflect the final terms, in each case in the form filed or required to be filed with the Commission or, if not required to be filed, in the form retained in the Company’s records pursuant to Rule 433(g).

“Issuer General Use Free Writing Prospectus” means any Issuer Free Writing Prospectus that is intended for general distribution to prospective investors (other than a “*bona fide* electronic road show,” as defined in Rule 433 (a “Bona Fide Electronic Road Show”)), as evidenced by its being specified in Schedule B-2 hereto.

“Issuer Limited Use Free Writing Prospectus” means any Issuer Free Writing Prospectus that is not an Issuer General Use Free Writing Prospectus.

“Testing-the-Waters Communication” means any oral or written communication with potential investors undertaken in reliance on Section 5(d) of the 1933 Act.

“Written Testing-the-Waters Communication” means any Testing-the-Waters Communication that is a written communication within the meaning of Rule 405 under the 1933 Act.

All references in this Agreement to financial statements and schedules and other information which is “contained,” “included” or “stated” (or other references of like import) in the Registration Statement, any preliminary prospectus or the Prospectus shall be deemed to include all such financial statements and schedules and other information incorporated or deemed incorporated by reference in the Registration Statement, any preliminary prospectus or the Prospectus, as the case may be, prior to the execution and delivery of this Agreement; and all references in this Agreement to amendments or supplements to the Registration Statement, any preliminary prospectus or the Prospectus shall be deemed to include the filing of any document under the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder (collectively, the “1934 Act”), incorporated or deemed to be incorporated by reference in the Registration Statement, such preliminary prospectus or the Prospectus, as the case may be, at or after the execution and delivery of this Agreement.

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SECTION 1. Representations and Warranties.

(a) *Representations and Warranties by the Company.* The Company represents and warrants to each Underwriter as of the date hereof, the Applicable Time and the Closing Time (as defined below), and agrees with each Underwriter, as follows:

(i) Registration Statement and Prospectuses. The Company meets the requirements for use of Form S-3 under the 1933 Act. Each of the Registration Statement and any amendment thereto has become effective under the 1933 Act. No stop order suspending the effectiveness of the Registration Statement or any post-effective amendment thereto has been issued by the Commission under the 1933 Act, no order preventing or suspending the use of any preliminary prospectus or the Prospectus has been issued by the Commission and no proceedings for any of those purposes have been instituted by the Commission or are pending or, to the Company's knowledge, contemplated by the Commission. The Company has complied with each request (if any) from the Commission for additional information.

Each of the Registration Statement and any post-effective amendment thereto, at the time of its effectiveness and at each deemed effective date with respect to the Underwriters pursuant to Rule 430B(f)(2) under the 1933 Act Regulations, complied in all material respects with the requirements of the 1933 Act and the 1933 Act Regulations. Each preliminary prospectus, the Prospectus and any amendment or supplement thereto, at the time each was filed with the Commission, complied in all material respects with the requirements of the 1933 Act and the 1933 Act Regulations. Each preliminary prospectus delivered to the Underwriters for use in connection with the offering and the Prospectus was or will be identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T.

The documents incorporated or deemed to be incorporated by reference in the Registration Statement and the Prospectus, when they became effective or at the time they were or hereafter are filed with the Commission, complied and will comply in all material respects with the requirements of the 1934 Act and the rules and regulations of the Commission under the 1934 Act (the "1934 Act Regulations").

The Registration Statement, any preliminary prospectus and the Prospectus, and the filing of the Registration Statement, any preliminary prospectus and the Prospectus with the Commission have been duly authorized by and on behalf of the Company, and the Registration Statement has been duly executed pursuant to such authorization.

(ii) Accurate Disclosure. Neither the Registration Statement nor any amendment thereto, at its effective time, at the Closing Time, contained, contains or will contain an untrue statement of a material fact or omitted, omits or will omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. As of the Applicable Time, none of (A) the General Disclosure Package, (B) any individual Issuer Limited Use Free Writing Prospectus, when considered together with the General Disclosure Package, nor (C) any individual Written Testing-the-Waters Communication, when considered together with the General Disclosure Package, included, includes or will include an untrue statement of a material fact or omitted, omits or will omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. Neither the Prospectus nor any amendment or supplement thereto (including any prospectus wrapper), as of its issue date, at the time of any filing with the Commission pursuant to Rule 424(b), at the Closing Time, included, includes or will include an untrue statement of a material fact or omitted, omits or will omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The documents incorporated or deemed to be incorporated by reference in the Registration Statement, the General Disclosure Package and the Prospectus, at the time the Registration Statement became effective or when such documents incorporated by reference were filed with the Commission, as the case may be, when read together with the other information in the Registration Statement, the General Disclosure Package or the Prospectus, as the case may be, did not and will not include an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading.

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The representations and warranties in this subsection shall not apply to statements in or omissions from the Registration Statement (or any amendment thereto), the General Disclosure Package or the Prospectus (or any amendment or supplement thereto, including any prospectus wrapper) made in reliance upon and in conformity with written information furnished to the Company by any Underwriter through the Representative expressly for use therein. For purposes of this Agreement, the only information so furnished shall be the information in the twelfth paragraph under the section titled “Underwriting” contained in the Prospectus (collectively, the “Underwriter Information”).

(iii) Issuer Free Writing Prospectuses. No Issuer Free Writing Prospectus conflicts or will conflict with the information contained in the Registration Statement or the Prospectus, including any document incorporated by reference therein, and any preliminary or other prospectus deemed to be a part thereof that has not been superseded or modified. No filing of any “road show” (as defined in Rule 433(h)) is required in connection with the offering of the Securities. Any Issuer Free Writing Prospectus that the Company is required to file pursuant to Rule 433(d) under the Securities Act has been, or will be, filed with the Commission in accordance with the requirements of the 1933 Act and the 1933 Act Regulations. Each Issuer Free Writing Prospectus that the Company has filed, or is required to file, pursuant to Rule 433(d) under the 1933 Act or that was prepared by or behalf of or used or referred to by the Company complies or will comply in all material respects with the requirements of the 1933 Act and the 1933 Act Regulations. Except for the Issuer Free Writing Prospectuses, if any, identified in Schedule B-2 hereto, and electronic road shows, if any, each furnished to the Representative before first use, the Company has not prepared, used or referred to, and will not, without the prior consent of the Representative, prepare, use or refer to, any issuer free writing prospectus.

(iv) [Reserved].

(v) Testing-the-Waters Materials. The Company (A) has not engaged in any Testing-the-Waters Communication other than Testing-the-Waters Communications with the consent of the Representative with entities that are qualified institutional buyers within the meaning of Rule 144A under the 1933 Act or institutions that are accredited investors within the meaning of Rule 501 under the 1933 Act and (B) has not authorized anyone other than the Representative to engage in Testing-the-Waters Communications. The Company reconfirms that the Representative has been authorized to act on its behalf in undertaking Testing-the-Waters Communications. The Company has not distributed any Written Testing-the-Waters Communications other than those listed on Schedule B-3 hereto.

(vi) Company Not Ineligible Issuer. At the time of filing the Registration Statement and any post-effective amendment thereto, at the earliest time thereafter that the Company or another offering participant made a *bona fide* offer (within the meaning of Rule 164(h)(2) of the 1933 Act Regulations) of the Securities and at the date hereof, the Company was not and is not an “ineligible issuer,” as defined in Rule 405, without taking account of any determination by the Commission pursuant to Rule 405 that it is not necessary that the Company be considered an ineligible issuer.

(vii) Emerging Growth Company Status. From the time of the initial filing of the Registration Statement with the Commission (or, if earlier, the first date on which the Company engaged directly or through any individual or entity authorized to act on its behalf in any Testing-the-Waters Communication) through the date hereof, the Company has been and is an “emerging growth company,” as defined in Section 2(a) of the 1933 Act (an “Emerging Growth Company”).

(viii) Independent Accountants. The accountants who certified the financial statements and supporting schedules included in the Registration Statement, the General Disclosure Package and the Prospectus are independent public accountants as required by the 1933 Act, the 1933 Act Regulations, the 1934 Act, the 1934 Act Regulations and the Public Company Accounting Oversight Board (United States).

(ix) Financial Statements; Non-GAAP Financial Measures. The financial statements included or incorporated by reference in the Registration Statement, the General Disclosure Package and the Prospectus, together with the related schedules and notes, comply as to form in all material respects with Regulation S-X under the 1933 Act and present fairly, in all material respects, the financial position of the Company and its consolidated Subsidiaries (as defined below) at the dates indicated and the statement of operations, stockholders’ equity and cash flows of the Company and its consolidated Subsidiaries for the periods specified; said financial statements have been prepared in conformity with U.S. generally accepted accounting principles (“GAAP”) applied on a consistent basis throughout the periods involved. The supporting schedules, if any, present fairly, in all material respects, in accordance with GAAP the information required to be stated therein. Except as included therein, no historical or pro forma financial statements or supporting schedules are required to be included or incorporated by reference in the Registration Statement, the General Disclosure Package or the Prospectus under the 1933 Act or the 1933 Act Regulations. All disclosures contained in the Registration Statement, the General Disclosure Package or the Prospectus, or incorporated by reference therein, regarding “non-GAAP financial measures” (as such term is defined by the rules and regulations of the Commission) comply with Regulation G of the 1934 Act, and Item 10 of Regulation S-K, to the extent applicable. The interactive data in eXtensible Business Reporting Language incorporated by reference in the Registration Statement, the General Disclosure Package and the Prospectus fairly presents the information called for in all material respects and has been prepared in accordance with the Commission's rules and guidelines applicable thereto.

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(x) Compliance with the Sarbanes-Oxley Act of 2002. There is and has been no failure on the part of the Company or any of the Company's directors or officers, in their capacities as such, to comply in all material respects with any provision of the Sarbanes-Oxley Act of 2002 and the rules and regulations promulgated in connection therewith, including Section 402 related to loans and Sections 302 and 906 related to certifications.

(xi) No Material Adverse Change in Business. Except as otherwise stated therein, since the respective dates as of which information is given in the Registration Statement, the General Disclosure Package or the Prospectus, (A) there has been no material adverse change in the condition, financial or otherwise, or in the earnings, business affairs or business prospects of the Company and its Subsidiaries (as defined below) considered as one enterprise, whether or not arising in the ordinary course of business (a "Material Adverse Effect"), (B) there have been no transactions entered into by the Company or any of its Subsidiaries, other than those in the ordinary course of business, which are material with respect to the Company and its Subsidiaries considered as one enterprise, (C) there have been no material liabilities or obligations, direct or contingent, entered into by the Company or any of its Subsidiaries and (D) there has been no dividend or distribution of any kind declared, paid or made by the Company on any class of its capital stock.

(xii) Good Standing of the Company. The Company has been duly organized and is validly existing as a corporation in good standing under the laws of the State of Delaware and has corporate power and authority to own, lease and operate its properties and to conduct its business as described in the Registration Statement, the General Disclosure Package and the Prospectus and to enter into and perform its obligations under this Agreement; and the Company is duly qualified as a foreign corporation to transact business and is in good standing in each other jurisdiction in which such qualification is required, whether by reason of the ownership or leasing of property or the conduct of business, except where the failure to be so qualified or to be in good standing would not result in a Material Adverse Effect.

(xiii) Good Standing of the Company's Subsidiaries. Each subsidiary of the Company (each, a "Subsidiary" and, collectively, the "Subsidiaries") has been duly organized and is validly existing in good standing under the laws of the jurisdiction of its incorporation or organization, has corporate or similar power and authority to own, lease and operate its properties and to conduct its business as described in the Registration Statement, the General Disclosure Package and the Prospectus and is duly qualified to transact business and is in good standing in each jurisdiction in which such qualification is required, whether by reason of the ownership or leasing of property or the conduct of business, except where the failure to be so qualified or to be in good standing would not result in a Material Adverse Effect. Except as otherwise disclosed in the Registration Statement, the General Disclosure Package and the Prospectus, all of the issued and outstanding capital stock of each Subsidiary has been duly authorized and validly issued, is fully paid and non-assessable and is owned by the Company, directly or through Subsidiaries, free and clear of any security interest, mortgage, pledge, lien, encumbrance, claim or equity. None of the outstanding shares of capital stock of any Subsidiary was issued in violation of the preemptive or similar rights of any securityholder of such Subsidiary. The only Subsidiaries of the Company are the entities listed on Exhibit 21 to the Registration Statement.

(xiv) Capitalization. The authorized, issued and outstanding shares of capital stock of the Company are as set forth in the Registration Statement, the General Disclosure Package and the Prospectus (except for subsequent issuances, if any, (A) pursuant to this Agreement, (B) pursuant to reservations, agreements or employee benefit plans referred to in the Registration Statement, the General Disclosure Package and the Prospectus or (C) pursuant to the conversion of convertible securities or exercise of options referred to in the Registration Statement, the General Disclosure Package and the Prospectus). The outstanding shares of capital stock of the Company have been duly authorized and are validly issued, fully paid and non-assessable. None of the outstanding shares of capital stock of the Company was issued in violation of the preemptive or other similar rights of any securityholder of the Company.

(xv) Authorization of Agreement. This Agreement has been duly authorized, executed and delivered by the Company.

(xvi) Authorization and Description of Securities. The Securities to be purchased by the Underwriters from the Company have been duly authorized for issuance and sale to the Underwriters pursuant to this Agreement and, when issued and delivered by the Company pursuant to this Agreement against payment of the consideration set forth herein, will be validly issued and fully paid and non-assessable; and the issuance of the Securities is not subject to the preemptive or other similar rights of any securityholder of the Company. The Common Stock conforms to all statements relating thereto contained in the Registration Statement, the General Disclosure Package and the Prospectus and such description conforms to the rights set forth in the instruments defining the same. No holder of Securities will be subject to personal liability by reason of being such a holder.

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(xvii) Registration Rights. There are no persons with registration rights or other similar rights to have any securities registered for sale pursuant to the Registration Statement or otherwise registered for sale or sold by the Company under the 1933 Act pursuant to this Agreement, other than those rights that have been disclosed in the Registration Statement, the General Disclosure Package and the Prospectus and have been waived.

(xviii) Absence of Violations, Defaults and Conflicts. Neither the Company nor any Subsidiary is (A) in violation of its charter, by-laws or similar organizational document, (B) in default in the performance or observance of any obligation, agreement, covenant or condition contained in any contract, indenture, mortgage, deed of trust, loan or credit agreement, note, lease or other agreement or instrument to which the Company or any Subsidiary is a party or by which either of them may be bound or to which any of the properties or assets of the Company or any Subsidiary is subject (collectively, "Agreements and Instruments"), except for such defaults that would not, singly or in the aggregate, result in a Material Adverse Effect, or (C) in violation of any law, statute, rule, regulation, judgment, order, writ or decree of any arbitrator, court, governmental body, regulatory body, administrative agency or other authority, body or agency having jurisdiction over the Company or its Subsidiaries or any of their respective properties, assets or operations (each, a "Governmental Entity"), except for such violations that would not, singly or in the aggregate, result in a Material Adverse Effect. The execution, delivery and performance of this Agreement and the consummation of the transactions contemplated herein and in the Registration Statement, the General Disclosure Package and the Prospectus (including the issuance and sale of the Securities and the use of the proceeds from the sale of the Securities as described therein under the caption "Use of Proceeds") and compliance by the Company with its obligations hereunder have been duly authorized by all necessary corporate action and do not and will not, whether with or without the giving of notice or passage of time or both, conflict with or constitute a breach of, or default or Repayment Event (as defined below) under, or result in the creation or imposition of any lien, charge or encumbrance upon any properties or assets of the Company or its Subsidiaries pursuant to, the Agreements and Instruments (except for such conflicts, breaches, defaults or Repayment Events or liens, charges or encumbrances that would not, singly or in the aggregate, result in a Material Adverse Effect), nor will such action result in any violation of the provisions of the charter, by-laws or similar organizational document of the Company or its Subsidiaries or any law, statute, rule, regulation, judgment, order, writ or decree of any Governmental Entity. As used herein, a "Repayment Event" means any event or condition which gives the holder of any note, debenture or other evidence of indebtedness (or any person acting on such holder's behalf) the right to require the repurchase, redemption or repayment of all or a portion of such indebtedness by the Company or its Subsidiaries.

(xix) Listing. The Securities have been approved for listing on the NASDAQ Capital Market, subject to notice of issuance.

(xx) Absence of Labor Dispute. No labor dispute with the employees of the Company or its Subsidiaries exists or, to the knowledge of the Company, is imminent, and the Company is not aware of any existing or imminent labor disturbance by the employees of any of its or its Subsidiaries' principal suppliers, manufacturers, customers or contractors, which, in either case, would result in a Material Adverse Effect.

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(xxi) Absence of Proceedings. Except as disclosed in the Registration Statement, the General Disclosure Package and the Prospectus, there is no action, suit, proceeding, inquiry or investigation before or brought by any Governmental Entity (including, without limitation, any action, suit proceeding, inquiry or investigation before or brought by the U.S. Food and Drug Administration (the “FDA”) or the European Medicines Agency (the “EMA”)) now pending or, to the knowledge of the Company, threatened, against or affecting the Company or its Subsidiaries, which would reasonably be expected to result in a Material Adverse Effect, or which would reasonably be expected to materially and adversely affect their respective properties or assets or the consummation of the transactions contemplated in this Agreement or the performance by the Company of its obligations hereunder; and the aggregate of all pending legal or governmental proceedings to which the Company or any such Subsidiary is a party or of which any of their respective properties or assets is the subject which are not described in the Registration Statement, the General Disclosure Package and the Prospectus, including ordinary routine litigation incidental to the business, would not reasonably be expected to result in a Material Adverse Effect.

(xxii) Accuracy of Exhibits. There are no contracts or documents which are required to be described in the Registration Statement, the General Disclosure Package or the Prospectus or to be filed as exhibits to the Registration Statement which have not been so described and filed as required.

(xxiii) Absence of Further Requirements. No filing with, or authorization, approval, consent, license, order, registration, qualification or decree of, any Governmental Entity is necessary or required for the performance by the Company of its obligations hereunder, in connection with the offering, issuance or sale of the Securities hereunder or the consummation of the transactions contemplated by this Agreement, except such as have been already obtained or as may be required under the 1933 Act, the 1933 Act Regulations, the rules of the NASDAQ Stock Market LLC, state securities laws or the rules of FINRA.

(xxiv) Possession of Licenses and Permits. The Company and its Subsidiaries possess such permits, licenses, approvals, consents and other authorizations (collectively, “Governmental Licenses”) issued by the appropriate Governmental Entities necessary to conduct the business now operated by them (including, without limitation, all such permits, licenses, approvals, consents and other authorizations required by the FDA, the EMA, or any other federal, state, local or foreign agencies or bodies engaged in the regulation of clinical or preclinical studies, pharmaceuticals, biologics, biohazardous substances or activities related to the business now operated by the Company and its Subsidiaries), except where the failure so to possess would not, singly or in the aggregate, result in a Material Adverse Effect. The Company and its Subsidiaries are in compliance with the terms and conditions of all Governmental Licenses, except where the failure so to comply would not, singly or in the aggregate, result in a Material Adverse Effect. The Company has fulfilled and performed all of its material obligations with respect to the Governmental Licenses and, to the knowledge of the Company, no event has occurred which allows, or after notice or lapse of time would allow, revocation or termination thereof or results in any other material impairment of the rights of the Company as a holder of any permit, except where the failure to so fulfill or perform, or the occurrence of such event, would not, singly or in the aggregate, result in a Material Adverse Effect. All of the Governmental Licenses are valid and in full force and effect, except where the invalidity of such Governmental Licenses or the failure of such Governmental Licenses to be in full force and effect would not, singly or in the aggregate, result in a Material Adverse Effect. Neither the Company nor its Subsidiaries has received any notice of proceedings relating to the revocation or modification of any Governmental Licenses which, singly or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would result in a Material Adverse Effect.

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(xxv) Title to Property. The Company and its Subsidiaries have good and marketable title to all real property owned by them and good title to all other properties owned by them, in each case, free and clear of all mortgages, pledges, liens, security interests, claims, restrictions or encumbrances of any kind except such as (A) are described in the Registration Statement, the General Disclosure Package and the Prospectus or (B) do not, singly or in the aggregate, materially affect the value of such property and do not materially interfere with the use made and proposed to be made of such property by the Company or its Subsidiaries; and all of the leases and subleases material to the business of the Company and its Subsidiaries, considered as one enterprise, and under which the Company or its Subsidiaries holds properties described in the Registration Statement, the General Disclosure Package or the Prospectus, are in full force and effect, and neither the Company nor any such Subsidiary has any notice of any material claim of any sort that has been asserted by anyone adverse to the rights of the Company or any Subsidiary under any of the leases or subleases mentioned above, or affecting or questioning the rights of the Company or such Subsidiary to the continued possession of the leased or subleased premises under any such lease or sublease.

(xxvi) Title to Intellectual Property. Except as described in the Registration Statement, the General Disclosure Package and the Prospectus, the Company owns or has valid, binding and enforceable licenses or other rights under the patents, patent applications, licenses, inventions, copyrights, know how (including trade secrets and other unpatented and/or unpatentable proprietary or confidential information, systems or procedures), trademarks, service marks, trade names or other intellectual property necessary for, or used in the conduct, or the proposed conduct, of the business of the Company in the manner described in the Registration Statement, the General Disclosure Package and the Prospectus (collectively, the "Intellectual Property"), except to the extent that the failure to own, possess, license or otherwise hold adequate rights to use such Intellectual Property would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; the patents, trademarks, and copyrights, if any, included within the Intellectual Property are valid, enforceable, and subsisting; other than as disclosed in the Registration Statement, the General Disclosure Package and the Prospectus, (A) the Company is not obligated to pay a material royalty, grant a license to, or provide other material consideration to any third party in connection with the Intellectual Property, (B) the Company has not received any notice of any claim of infringement, misappropriation or conflict with any asserted rights of others with respect to any of the Company's drug candidates, services, processes or Intellectual Property, (C) to the knowledge of the Company, neither the sale nor use of any of the discoveries, inventions, drug candidates, services or processes of the Company referred to in the Registration Statement, the General Disclosure Package or the Prospectus do or will, to the knowledge of the Company, infringe, misappropriate or violate any right or valid patent claim of any third party, (D) none of the technology employed by the Company has been obtained or is being used by the Company in material violation of any contractual obligation binding on the Company or, to the Company's knowledge, upon any of its officers, directors or employees or otherwise in violation of the rights of any persons, (E) to the knowledge of the Company, no third party has any ownership right in or to any Intellectual Property that is owned by the Company, other than any co-owner of any patent constituting Intellectual Property who is listed on the records of the U.S. Patent and Trademark Office (the "USPTO") and any co-owner of any patent application constituting Intellectual Property who is named in such patent application, and, to the knowledge of the Company, no third party has any ownership right in or to any Intellectual Property in any field of use that is exclusively licensed to the Company, other than any licensor to the Company of such Intellectual Property, (F) there is no material infringement by third parties of any Intellectual Property, (G) there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others challenging the Company's rights in or to any Intellectual Property, and (H) there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others challenging the validity or scope of any Intellectual Property, except, in the case of any of clauses (B), (E), (G) and (H) above, for any such infringement by third parties or any such pending or threatened suit, action, proceeding or claim as would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect. The Company is in compliance in all material respects with the terms of each agreement pursuant to which Intellectual Property has been licensed to the Company, and all such agreements are in full force and effect.

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(xxvii) Patents and Patent Applications. To the Company's knowledge, all patents and patent applications owned by the Company and filed with the USPTO or any foreign or international patent authority (the "Company Patent Rights") and all patents and patent applications in-licensed by the Company and filed with the USPTO or any foreign or international patent authority (the "In-licensed Patent Rights") have been duly and properly filed, except as would not be reasonably expected, individually or in the aggregate, to have a Material Adverse Effect; the Company believes it has complied with its duty of candor and disclosure to the USPTO for the Company Patent Rights and, to the Company's knowledge, the licensors of the In-licensed Patent Rights have complied with their duty of candor and disclosure to the USPTO for the In-licensed Patent Rights.

(xxviii) FDA Compliance. Except as described in the Registration Statement, the General Disclosure Package and the Prospectus, and except as would not reasonably be expected to result in a Material Adverse Effect if not the case, the Company: (A) is and at all times has been in compliance with all statutes, rules or regulations of the FDA and other comparable Governmental Entities applicable to the ownership, testing, development, manufacture, packaging, processing, use, distribution, marketing, labeling, promotion, sale, offer for sale, storage, import, export or disposal of any product under development, manufactured or distributed by the Company ("Applicable Laws"); (B) has not received any FDA Form 483, notice of adverse finding, warning letter, untitled letter or other correspondence or notice from the FDA or any Governmental Authority alleging or asserting material noncompliance with any Applicable Laws or any licenses, certificates, approvals, clearances, exemptions, authorizations, permits and supplements or amendments thereto required by any such Applicable Laws ("Authorizations"); (C) possesses all Authorizations and such Authorizations are valid and in full force and effect and the Company is not in violation of any term of any such Authorizations; (D) has not received notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from the FDA or any Governmental Authority or third party alleging that any product operation or activity is in violation of any Applicable Laws or Authorizations and has no knowledge that the FDA or any Governmental Authority or third party is considering any such claim, litigation, arbitration, action, suit, investigation or proceeding; (E) has not received notice that the FDA or any Governmental Authority has taken, is taking or intends to take action to limit, suspend, modify or revoke any Authorizations and has no knowledge that the FDA or any Governmental Authority is considering such action; and (F) has filed, obtained, maintained or submitted all reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Applicable Laws or Authorizations and that all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were materially complete and correct on the date filed (or were corrected or supplemented by a subsequent submission).

(xxix) Compliance with Health Care Laws. The Company has operated and currently is in compliance with all applicable health care laws, rules and regulations (except where such failure to operate or non-compliance would not, singly or in the aggregate, result in a Material Adverse Effect), including, without limitation, (i) the Federal, Food, Drug and Cosmetic Act (21 U.S.C. §§ 301 et seq.); (ii) all applicable federal, state, local and all applicable foreign healthcare related fraud and abuse laws, including, without limitation, the federal Anti-kickback Statute (42 U.S.C. § 1320a-7b(b)), the U.S. Physician Payments Sunshine Act (42 U.S.C. § 1320a-7h), the civil False Claims Act (31 U.S.C. §§ 3729 et seq.), the criminal False Claims Law (42 U.S.C. § 1320a-7b(a)), all criminal laws relating to healthcare fraud and abuse, including but not limited to 18 U.S.C. Sections 286 and 287, the healthcare fraud criminal provisions under the U.S. Health Insurance Portability and Accountability Act of 1996 ("HIPAA") (42 U.S.C. Section 1320d et seq.), the exclusion laws (42 U.S.C. § 1320a-7), and the civil monetary penalties law (42 U.S.C. § 1320a-7a); (iii) HIPAA, as amended by the Health Information Technology for Economic Clinical Health Act (42 U.S.C. Section 17921 et seq.); (iv) the regulations promulgated pursuant to such laws; and (v) any other similar local, state, federal, or foreign laws (collectively, the "Health Care Laws"). Neither the Company, nor to the Company's knowledge, any of its officers, directors, employees or agents have engaged in activities which are, as applicable, cause for false claims liability, civil penalties, or mandatory or permissive exclusion from Medicare, Medicaid, or any other state or federal healthcare program. The Company has not received written notice or other correspondence of any claim, action, suit, audit, survey, proceeding, hearing, enforcement, investigation, arbitration or other action ("Action") from any court or arbitrator or governmental or regulatory authority or third party alleging that any product operation or activity is in violation of any Health Care Laws, and, to the Company's knowledge, no such claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action is threatened. The Company is not a party to and does not have any ongoing reporting obligations pursuant to any corporate integrity agreement, deferred prosecution agreement, monitoring agreement, consent decree, settlement order, plan of correction or similar agreement imposed by any governmental or regulatory authority. Additionally, neither the Company, nor to the Company's knowledge, any of its employees, officers or directors, has been excluded, suspended or debarred from participation in any U.S. state or federal health care program or human clinical research or, to the knowledge of the Company, is subject to a governmental inquiry, investigation, proceeding, or other similar action that could reasonably be expected to result in debarment, suspension, or exclusion.

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(xxx) Environmental Laws. Except as described in the Registration Statement, the General Disclosure Package and the Prospectus or would not, singly or in the aggregate, result in a Material Adverse Effect, (A) neither the Company nor any Subsidiary is in violation of any federal, state, local or foreign statute, law, rule, regulation, ordinance, code, policy or rule of common law or any judicial or administrative interpretation thereof, including any judicial or administrative order, consent, decree or judgment, relating to pollution or protection of human health, the environment (including, without limitation, ambient air, surface water, groundwater, land surface or subsurface strata) or wildlife, including, without limitation, laws and regulations relating to the release or threatened release of chemicals, pollutants, contaminants, wastes, toxic substances, hazardous substances, petroleum or petroleum products, asbestos-containing materials or mold (collectively, "Hazardous Materials") or to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials (collectively, "Environmental Laws"), (B) the Company and its Subsidiaries have all permits, authorizations and approvals required under any applicable Environmental Laws and are each in compliance with their requirements, (C) there are no pending or, to the knowledge of the Company threatened, administrative, regulatory or judicial actions, suits, demands, demand letters, claims, liens, notices of noncompliance or violation, investigation or proceedings relating to any Environmental Law against the Company or any Subsidiary and (D) there are no events or circumstances that would reasonably be expected to form the basis of an order for clean-up or remediation, or an action, suit or proceeding by any private party or Governmental Entity, against or affecting the Company or any Subsidiary relating to Hazardous Materials or any Environmental Laws.

(xxxix) Accounting Controls and Disclosure Controls. The Company and each of its Subsidiaries maintain effective internal control over financial reporting (as defined under Rule 13a-15 and 15d-15 under the rules and regulations of the Commission under the 1934 Act Regulations) and a system of internal accounting controls sufficient to provide reasonable assurances that (A) transactions are executed in accordance with management's general or specific authorization; (B) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain accountability for assets; (C) access to assets is permitted only in accordance with management's general or specific authorization; (D) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences; and (E) the interactive data in eXtensible Business Reporting Language incorporated by reference in the Registration Statement, the General Disclosure Package and the Prospectus fairly presents the information called for in all material respects and is prepared in accordance with the Commission's rules and guidelines applicable thereto. Except as described in the Registration Statement, the General Disclosure Package and the Prospectus, since the end of the Company's most recent audited fiscal year, there has been (1) no material weakness in the Company's internal control over financial reporting (whether or not remediated) and (2) no change in the Company's internal control over financial reporting that has materially adversely affected, or is reasonably likely to materially adversely affect, the Company's internal control over financial reporting. The Company and each of its Subsidiaries maintain an effective system of disclosure controls and procedures (as defined in Rule 13a-15 and Rule 15d-15 under the 1934 Act Regulations) that are designed to ensure that information required to be disclosed by the Company in the reports that it files or submits under the 1934 Act is recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms, and is accumulated and communicated to the Company's management, including its principal executive officer or officers and principal financial officer or officers, as appropriate, to allow timely decisions regarding disclosure.

(xxxix) Tests and Preclinical and Clinical Trials. Except as would not be expected to result in a Material Adverse Effect if not the case, the studies, tests and preclinical and clinical trials conducted by or, to the Company's knowledge, on behalf of the Company were and, if still ongoing, are being conducted in accordance with experimental protocols, procedures and controls pursuant to all Authorizations and Applicable Laws, including, without limitation, the Federal Food, Drug and Cosmetic Act and the rules and regulations promulgated thereunder (collectively, "FFDCA"); the descriptions of the results of such studies, tests and trials contained in the Registration Statement, the General Disclosure Package and the Prospectus are, to the Company's knowledge, accurate and complete and fairly present the data derived from such studies, tests and trials; except to the extent disclosed in the Registration Statement, the General Disclosure Package and the Prospectus, the Company is not aware of any studies, tests or trials, the results of which the Company believes reasonably call into question the study, test, or trial results described or referred to in the Registration Statement, the General Disclosure Package and the Prospectus when viewed in the context in which such results are described and the clinical state of development; and, except to the extent disclosed in the Registration Statement, the General Disclosure Package or the Prospectus, the Company has not received any notices or correspondence from the FDA or any Governmental Entity requiring the termination or suspension of any studies, tests or preclinical or clinical trials conducted by or on behalf of the Company, other than ordinary course communications with respect to modifications in connection with the design and implementation of such trials, copies of which communications have been made available to you.

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(xxxiii) Payment of Taxes. All United States federal income tax returns of the Company and its Subsidiaries required by law to be filed have been filed and all taxes shown by such returns or otherwise assessed, which are due and payable, have been paid, except assessments against which appeals have been or will be promptly taken and as to which adequate reserves have been provided in conformity with GAAP, except where the failure to so file or pay would not reasonably be expected to have a Material Adverse Effect. The United States federal income tax returns of the Company through the fiscal year ended December 31, 2023 have been settled and no assessment in connection therewith has been made against the Company. The Company and its Subsidiaries have filed all other tax returns that are required to have been filed by them pursuant to applicable foreign, state, local or other law except insofar as the failure to file such returns would not result in a Material Adverse Effect, and have paid all taxes due pursuant to such returns or pursuant to any assessment received by the Company and its Subsidiaries, except for such taxes, if any, as are being contested in good faith and as to which adequate reserves have been established by the Company. The charges, accruals and reserves on the books of the Company in respect of any income and corporation tax liability for any years not finally determined are, in conformity with GAAP, adequate to meet any assessments or re-assessments for additional income tax for any years not finally determined, except to the extent of any inadequacy that would not result in a Material Adverse Effect.

(xxxiv) Insurance. The Company and its Subsidiaries carry or are entitled to the benefits of insurance, with financially sound and reputable insurers, in such amounts and covering such risks as is generally maintained by companies of established repute engaged in the same or similar business, and all such insurance is in full force and effect. The Company has no reason to believe that it or its Subsidiaries will not be able (A) to renew its existing insurance coverage as and when such policies expire or (B) to obtain comparable coverage from similar institutions as may be necessary or appropriate to conduct its business as now conducted and at a cost that would not result in a Material Adverse Effect. Neither of the Company nor its Subsidiaries has been denied any insurance coverage which it has sought or for which it has applied.

(xxxv) Investment Company Act. The Company is not required, and upon the issuance and sale of the Securities as herein contemplated and the application of the net proceeds therefrom as described in the Registration Statement, the General Disclosure Package and the Prospectus will not be required, to register as an “investment company” under the Investment Company Act of 1940, as amended (the “1940 Act”).

(xxxvi) Absence of Manipulation. Neither the Company nor any affiliate of the Company has taken, nor will the Company or any affiliate take, directly or indirectly, any action which is designed, or would be expected, to cause or result in, or which constitutes, the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Securities or to result in a violation of Regulation M under the 1934 Act.

(xxxvii) Foreign Corrupt Practices Act. None of the Company, its Subsidiaries or, to the knowledge of the Company, any director, officer, agent, employee, affiliate or other person acting on behalf of the Company or its Subsidiaries is aware of or has taken any action, directly or indirectly, that would result in a violation by such persons of the Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations thereunder (the “FCPA”), including, without limitation, making use of the mails or any means or instrumentality of interstate commerce corruptly in furtherance of an offer, payment, promise to pay or authorization of the payment of any money, or other property, gift, promise to give, or authorization of the giving of anything of value to any “foreign official” (as such term is defined in the FCPA) or any foreign political party or official thereof or any candidate for foreign political office, in contravention of the FCPA and the Company has and, to the knowledge of the Company, its affiliates have conducted their businesses in compliance with the FCPA and have instituted and maintain policies and procedures designed to ensure, and which are reasonably expected to continue to ensure, continued compliance therewith.

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(xxxviii) Money Laundering Laws. The operations of the Company and its Subsidiaries are and have been conducted at all times in compliance with applicable financial recordkeeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the money laundering statutes of all applicable jurisdictions, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any Governmental Entity (collectively, the “Money Laundering Laws”); and no action, suit or proceeding by or before any Governmental Entity involving the Company or its Subsidiaries with respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

(xxxix) OFAC. None of the Company, its Subsidiaries or, to the knowledge of the Company, any director, officer, agent, employee, affiliate or representative of the Company or its Subsidiaries is an individual or entity (“Person”) currently the subject or target of any sanctions administered or enforced by the United States Government, including, without limitation, the U.S. Department of the Treasury’s Office of Foreign Assets Control, the United Nations Security Council, the European Union, His Majesty’s Treasury, or other relevant sanctions authority (collectively, “Sanctions”), nor is the Company located, organized or resident in a country or territory that is the subject of Sanctions; and the Company will not directly or indirectly use the proceeds of the sale of the Securities, or lend, contribute or otherwise make available such proceeds to any Subsidiary, joint venture partners or other Person, to fund any activities of or business with any Person, or in any country or territory, that, at the time of such funding, is the subject of Sanctions or in any other manner that will result in a violation by any Person (including any Person participating in the transaction, whether as underwriter, advisor, investor or otherwise) of Sanctions. The Company and its Subsidiaries represent and covenant that, except as detailed in the Registration Statement, the General Disclosure Package and the Prospectus, for the past 5 years, they have not engaged in and are not now engaged in any dealing or transactions with any Person, or in any country or territory, that at the time of the dealing or transaction is or was the subject of Sanctions.

(xl) Lending Relationship. Except as disclosed in the Registration Statement, the General Disclosure Package and the Prospectus, the Company (i) does not have any material lending or other relationship with any banking or lending affiliate of any Underwriter and (ii) does not intend to use any of the proceeds from the sale of the Securities to repay any outstanding debt owed to any affiliate of any Underwriter.

(xli) Statistical and Market-Related Data. Any statistical and market-related data included in the Registration Statement, the General Disclosure Package or the Prospectus are based on or derived from sources that the Company believes, after reasonable inquiry, to be reliable and accurate and, to the extent required, the Company has obtained the written consent to the use of such data from such sources.

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(xlii) Maintenance of Rating. The Company has no debt securities or preferred stock that is rated by any “nationally recognized statistical rating organization” (as that term is defined by the Commission for purposes of Rule 436(g)(2) under the 1933 Act).

(xlili) Privacy and Data Protection. The Company and its Subsidiaries have operated their business in a manner compliant in all material respects with all United States federal, state, local and non-United States privacy, data security and data protection laws and regulations applicable to the Company’s collection, use, transfer, protection, disposal, disclosure, handling, storage and analysis of personal data. The Company and its Subsidiaries have been and are in compliance in all material respects with internal policies and procedures designed to ensure the integrity and security of the data collected, handled or stored in connection with its business; the Company and its Subsidiaries have been and are in compliance in all material respects with internal policies and procedures designed to ensure compliance with the Health Care Laws that govern privacy and data security and take, and have taken reasonably appropriate steps designed to assure compliance with such policies and procedures. The Company and its Subsidiaries have taken reasonable steps to maintain the confidentiality of its personally identifiable information, protected health information, consumer information and other confidential information of the Company, its Subsidiaries and any third parties in its possession (“Sensitive Company Data”). The tangible or digital information technology systems (including computers, screens, servers, workstations, routers, hubs, switches, networks, data communications lines, technical data and hardware), software and telecommunications systems used or held for use by the Company and its Subsidiaries (the “Company IT Assets”) are adequate and operational in all material respects for, in accordance with their documentation and functional specifications, the business of the Company and its Subsidiaries as now operated and as currently proposed to be conducted as described in the Registration Statement, the General Disclosure Package and the Prospectus. The Company and its Subsidiaries have used reasonable efforts to establish, and have established, commercially reasonable disaster recovery and security plans for the business consistent with industry standards and practices of similarly-sized companies in all material respects, including, without limitation, for the Company IT Assets and data held or used by or for the Company and its Subsidiaries. The Company and its Subsidiaries have not suffered or incurred any security breaches, compromises or incidents with respect to any Company IT Asset or Sensitive Company Data, except where such breaches, compromises or incidents would not reasonably be expected to, singly or in the aggregate, result in a Material Adverse Effect; and, to the Company’s knowledge, there has been no unauthorized or illegal use of or access to any Company IT Asset or Sensitive Company Data by any unauthorized third party, except where such unauthorized or illegal use of or access would not reasonably be expected to, singly or in the aggregate, result in a Material Adverse Effect. The Company and its Subsidiaries have not been required to notify any individual of any information security breach, compromise or incident involving Sensitive Company Data.

(xliv) No Broker Fees. Except as disclosed in the General Disclosure Package, there are no contracts, agreements or understandings between the Company and any person that would give rise to a valid claim against the Company or any Underwriter for a brokerage commission, finder’s fee or other like payment in connection with the offering of the Securities contemplated hereby.

(b) Officer’s Certificates. Any certificate signed by any officer of the Company or any of its Subsidiaries delivered to the Representative or to counsel for the Underwriters shall be deemed a representation and warranty by the Company to each Underwriter as to the matters covered thereby.

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SECTION 2. Sale and Delivery to Underwriters: Closing

(a) *Securities.* On the basis of the representations and warranties herein contained and subject to the terms and conditions herein set forth, the Company agrees to sell to each Underwriter, severally and not jointly, and each Underwriter, severally and not jointly, agrees to purchase from the Company, at the price per share set forth in Schedule A, that number of Securities set forth in Schedule A opposite the name of such Underwriter, plus any additional number of Securities which such Underwriter may become obligated to purchase pursuant to the provisions of Section 10 hereof, subject, in each case, to such adjustments among the Underwriters as the Representative in its sole discretion shall make to eliminate any sales or purchases of fractional shares.

(b) *[Reserved]*.

(c) *Payment.* Payment of the purchase price for, and delivery of certificates or security entitlements for, the Securities shall be made at the offices of Duane Morris LLP, or at such other place as shall be agreed upon by the Representative and the Company, at 10:00 A.M. (New York City time) on the first (second, if the pricing occurs after 4:30 P.M. (New York City time) on any given day) business day after the date hereof (unless postponed in accordance with the provisions of Section 10), or such other time not later than ten business days after such date as shall be agreed upon by the Representative and the Company (such time and date of payment and delivery being herein called "Closing Time"). Delivery of the Securities at the Closing Time shall be made through the facilities of The Depository Trust Company unless the Representative shall otherwise instruct.

Payment shall be made to the Company by wire transfer of immediately available funds to a bank account designated by the Company, against delivery to the Representative for the respective accounts of the Underwriters of certificates or security entitlements for the Securities to be purchased by them. It is understood that each Underwriter has authorized the Representative, for its account, to accept delivery of, receipt for, and make payment of the purchase price for, the Securities which it has agreed to purchase. Piper Sandler, individually and not as representative of the Underwriters, may (but shall not be obligated to) make payment of the purchase price for the Securities to be purchased by any Underwriter whose funds have not been received by the Closing Time, but such payment shall not relieve such Underwriter from its obligations hereunder.

SECTION 3. Covenants of the Company. The Company covenants with each Underwriter as follows:

(a) *Compliance with Securities Regulations and Commission Requests.* The Company, subject to Section 3(b), will comply with the requirements of Rule 430B, and will notify the Representative as soon as practicable, and confirm the notice in writing, (i) when any post-effective amendment to the Registration Statement shall become effective or any amendment or supplement to the Prospectus shall have been filed, (ii) of the receipt of any comments from the Commission, (iii) of any request by the Commission for any amendment to the Registration Statement or any amendment or supplement to the Prospectus (including any document incorporated by reference therein) or for additional information, (iv) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or any post-effective amendment or of any order preventing or suspending the use of any preliminary prospectus or the Prospectus, or of the suspension of the qualification of the Securities for offering or sale in any jurisdiction, or of the initiation or threatening of any proceedings for any of such purposes or of any examination pursuant to Section 8(d) or 8(e) of the 1933 Act concerning the Registration Statement and (v) if the Company becomes the subject of a proceeding under Section 8A of the 1933 Act in connection with the offering of the Securities. The Company will effect all filings required under Rule 424(b), in the manner and within the time period required by Rule 424(b) (without reliance on Rule 424(b)(8)), and will take such steps as it deems necessary to ascertain promptly whether the form of prospectus transmitted for filing under Rule 424(b) was received for filing by the Commission and, in the event that it was not, it will promptly file such prospectus. The Company will make every reasonable effort to prevent the issuance of any stop order, prevention or suspension and, if any such order is issued, to obtain the lifting thereof at the earliest possible moment.

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(b) *Continued Compliance with Securities Laws.* The Company will comply with the 1933 Act, the 1933 Act Regulations, the 1934 Act and the 1934 Act Regulations so as to permit the completion of the distribution of the Securities as contemplated in this Agreement and in the Registration Statement, the General Disclosure Package and the Prospectus. If at any time when a prospectus relating to the Securities is (or, but for the exception afforded by Rule 172 of the 1933 Act Regulations (“Rule 172”), would be) required by the 1933 Act to be delivered in connection with sales of the Securities, any event shall occur or condition shall exist as a result of which it is necessary, in the opinion of counsel for the Underwriters or for the Company, to (i) amend the Registration Statement in order that the Registration Statement will not include an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading, (ii) amend or supplement the General Disclosure Package or the Prospectus in order that the General Disclosure Package or the Prospectus, as the case may be, will not include any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein not misleading in the light of the circumstances existing at the time it is delivered to a purchaser or (iii) amend the Registration Statement or amend or supplement the General Disclosure Package or the Prospectus, as the case may be, in order to comply with the requirements of the 1933 Act or the 1933 Act Regulations, the Company will promptly (A) give the Representative notice of such event, (B) prepare any amendment or supplement as may be necessary to correct such statement or omission or to make the Registration Statement, the General Disclosure Package or the Prospectus comply with such requirements and, a reasonable amount of time prior to any proposed filing or use, furnish the Representative with copies of any such amendment or supplement and (C) file with the Commission any such amendment or supplement; provided that the Company shall not file or use any such amendment or supplement to which the Representative or counsel for the Underwriters shall object. The Company will furnish to the Underwriters such number of copies of such amendment or supplement as the Underwriters may reasonably request. The Company has given the Representative notice of any filings made pursuant to the 1934 Act or the 1934 Act Regulations within 48 hours prior to the Applicable Time; the Company will give the Representative notice of its intention to make any such filing from the Applicable Time to the Closing Time and will furnish the Representative with copies of any such documents a reasonable amount of time prior to such proposed filing, as the case may be, and will not file or use any such document to which the Representative or counsel for the Underwriters shall reasonably object.

(c) *Delivery of Registration Statements.* The Company has furnished or will deliver to the Representative and counsel for the Underwriters, without charge, signed copies of the Registration Statement as originally filed and each amendment thereto (including exhibits filed therewith or incorporated by reference therein and documents incorporated or deemed incorporated by reference therein) and signed copies of all consents and certificates of experts, and will also deliver to the Representative, without charge, a conformed copy of the Registration Statement as originally filed and each amendment thereto (without exhibits) for each of the Underwriters. The copies of the Registration Statement and each amendment thereto furnished to the Underwriters will be identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T.

(d) *Delivery of Prospectuses.* The Company has delivered to each Underwriter, without charge, as many copies of each preliminary prospectus as such Underwriter reasonably requested, and the Company hereby consents to the use of such copies for purposes permitted by the 1933 Act. The Company will furnish to each Underwriter, without charge, during the period when a prospectus relating to the Securities is (or, but for the exception afforded by Rule 172, would be) required to be delivered under the 1933 Act, such number of copies of the Prospectus (as amended or supplemented) as such Underwriter may reasonably request. The Prospectus and any amendments or supplements thereto furnished to the Underwriters will be identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T.

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(e) *Blue Sky Qualifications.* The Company will use its best efforts, in cooperation with the Underwriters, to qualify the Securities for offering and sale under the applicable securities laws of such states and other jurisdictions (domestic or foreign) as the Representative may designate and to maintain such qualifications in effect so long as required to complete the distribution of the Securities; provided, however, that the Company shall not be obligated to file any general consent to service of process or to qualify as a foreign corporation or as a dealer in securities in any jurisdiction in which it is not so qualified or to subject itself to taxation in respect of doing business in any jurisdiction in which it is not otherwise so subject.

(f) *Rule 158.* The Company will timely file such reports pursuant to the 1934 Act as are necessary in order to make generally available to its securityholders as soon as practicable an earning statement for the purposes of, and to provide to the Underwriters the benefits contemplated by, the last paragraph of Section 11(a) of the 1933 Act.

(g) *Use of Proceeds.* The Company will use the net proceeds received by it from the sale of the Securities in all material respects in the manner specified in the Registration Statement, the General Disclosure Package and the Prospectus under the heading "Use of Proceeds."

(h) *Listing.* The Company will use its best efforts to effect and maintain the listing of the Common Stock (including the Securities) on the Nasdaq Capital Market.

(i) *Restriction on Sale of Securities.* During a period of 60 days from the date of the Prospectus, the Company will not, without the prior written consent of the Representative, (i) directly or indirectly, offer, pledge, 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 or otherwise transfer or dispose of any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock or file or confidentially submit any registration statement under the 1933 Act with respect to any of the foregoing, (ii) enter into any swap or any other agreement or any transaction that transfers, in whole or in part, directly or indirectly, the economic consequence of ownership of the Common Stock, whether any such swap or transaction described in clause (i) or (ii) above is to be settled by delivery of Common Stock or such other securities, in cash or otherwise or (iii) publicly announce an intention to effect any such swap, agreement or other transaction described in clauses (i) and (ii). The foregoing sentence shall not apply to (A) the Securities to be sold hereunder; (B) any shares of Common Stock issued by the Company upon the exercise of an option or warrant or the conversion of a convertible security outstanding on the date hereof and referred to in the Registration Statement, the General Disclosure Package and the Prospectus; (C) any pre-funded warrants purchased by certain investors (the "Private Placement") as described in the Prospectus; (D) any shares of Common Stock issued by the Company upon the exercise of the pre-funded warrants pursuant to the Private Placement; (E) the filing of a registration statement on Form S-3 to register the resale of the shares issuable upon the exercise of the pre-funded warrants pursuant to the Private Placement; (F) any shares of Common Stock issued or restricted stock units or options to purchase Common Stock granted pursuant to existing employee benefit plans of the Company referred to in the Registration Statement, the General Disclosure Package and the Prospectus; (G) any shares of Common Stock issued pursuant to any existing non-employee director stock plan or dividend reinvestment plan referred to in the Registration Statement, the General Disclosure Package and the Prospectus; (H) any shares of Common Stock issued pursuant to contractual obligations described the Registration Statement, the General Disclosure Package and the Prospectus; or (I) the filing by the Company of any registration statement on Form S-8 or a successor form thereto.

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(j) *Reporting Requirements.* The Company, during the period when a Prospectus relating to the Securities is (or, but for the exception afforded by Rule 172, would be) required to be delivered under the 1933 Act, will file all documents required to be filed with the Commission pursuant to the 1934 Act within the time periods required by the 1934 Act and 1934 Act Regulations. Additionally, the Company shall report the use of proceeds from the issuance of the Securities as may be required under Rule 463 under the 1933 Act.

(k) *Issuer Free Writing Prospectuses.* The Company agrees that, unless it obtains the prior written consent of the Representative, it will not make any offer relating to the Securities that would constitute an Issuer Free Writing Prospectus or that would otherwise constitute a “free writing prospectus,” or a portion thereof, required to be filed by the Company with the Commission or retained by the Company under Rule 433; provided that the Representative will be deemed to have consented to the Issuer Free Writing Prospectuses listed on Schedule B-2 hereto and any “road show that is a written communication” within the meaning of Rule 433(d)(8)(i) that has been reviewed by the Representative. The Company represents that it has treated or agrees that it will treat each such free writing prospectus consented to, or deemed consented to, by the Representative as an “issuer free writing prospectus,” as defined in Rule 433, and that it has complied and will comply with the applicable requirements of Rule 433 with respect thereto, including timely filing with the Commission where required, legending and record keeping. If at any time following issuance of an Issuer Free Writing Prospectus there occurred or occurs an event or development as a result of which such Issuer Free Writing Prospectus conflicted or would conflict with the information contained in the Registration Statement, any preliminary prospectus or the Prospectus or included or would include an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances existing at that subsequent time, not misleading, the Company will promptly notify the Representative and will promptly amend or supplement, at its own expense, such Issuer Free Writing Prospectus to eliminate or correct such conflict, untrue statement or omission.

(l) *Testing-the-Waters Materials.* If at any time following the distribution of any Written Testing-the-Waters Communication there occurred or occurs an event or development as a result of which such Written Testing-the-Waters Communication included or would include an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances existing at that subsequent time, not misleading, the Company will promptly notify the Representative and will promptly amend or supplement, at its own expense, such Written Testing-the-Waters Communication to eliminate or correct such untrue statement or omission.

(m) *Emerging Growth Company Status.* The Company will promptly notify the Representative if the Company ceases to be an Emerging Growth Company at any time prior December 31, 2024, which is the date the Company will cease to be an Emerging Growth Company.

#### SECTION 4. Payment of Expenses.

(a) *Expenses.* The Company will pay or cause to be paid all expenses incident to the performance of its obligations under this Agreement, including (i) the preparation, printing and filing of the Registration Statement (including financial statements and exhibits) as originally filed and each amendment thereto, (ii) the preparation, printing and delivery to the Underwriters of copies of each preliminary prospectus, each Issuer Free Writing Prospectus and the Prospectus and any amendments or supplements thereto and any costs associated with electronic delivery of any of the foregoing by the Underwriters to investors, (iii) the preparation, issuance and delivery of the certificates or security entitlements for the Securities to the Underwriters, including any stock or other transfer taxes and any stamp or other duties payable upon the sale, issuance or delivery of the Securities to the Underwriters, (iv) the fees and disbursements of the Company’s counsel, accountants and other advisors, (v) the qualification of the Securities under securities laws in accordance with the provisions of Section 3(e) hereof, including filing fees and the reasonable fees and disbursements of counsel for the Underwriters in connection therewith and in connection with the preparation of a “Blue Sky Survey” and any supplement thereto, (vi) the fees and expenses of any transfer agent or registrar for the Securities, (vii) the costs and expenses of the Company relating to investor presentations on any “road show” undertaken in connection with the marketing of the Securities, including without limitation, expenses associated with the production of road show slides and graphics, fees and expenses of any consultants engaged in connection with the road show presentations, travel and lodging expenses of the representatives and officers of the Company and any such consultants, and the cost of aircraft and other transportation chartered by the Company in connection with the road show, (viii) the filing fees incident to, and the reasonable fees and disbursements of counsel to the Underwriters in connection with, the review by FINRA of the terms of the sale of the Securities, (ix) the reasonable fees and expenses of the Underwriters including the reasonable fees and expenses of the counsel to the Underwriters, payable upon the execution of this Agreement, in an amount not to exceed \$40,000, (x) the fees and expenses incurred in connection with the listing of the Securities on the Nasdaq Capital Market, and (xi) the costs and expenses (including, without limitation, any damages or other amounts payable in connection with legal or contractual liability) associated with the reforming of any contracts for sale of the Securities made by the Underwriters caused by a breach of the representation contained in the third sentence of Section 1(a)(ii).

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(b) *Termination of Agreement.* If this Agreement is terminated by the Representative in accordance with the provisions of Section 5, Section 9(a)(i) or Section 9(a)(iii), the Company shall reimburse the Underwriters for all of their reasonably documented out-of-pocket expenses, including the reasonable fees and disbursements of counsel for the Underwriters.

SECTION 5. Conditions of Underwriters' Obligations. The obligations of the several Underwriters hereunder are subject to the accuracy of the representations and warranties of the Company contained herein or in certificates of any officer of the Company or any of its Subsidiaries delivered pursuant to the provisions hereof, to the performance by the Company of its covenants and other obligations hereunder, and to the following further conditions:

(a) *Effectiveness of Registration Statement.* The Registration Statement, including any Rule 462(b) Registration Statement, has become effective and, at the Closing Time, no stop order suspending the effectiveness of the Registration Statement or any post-effective amendment thereto has been issued under the 1933 Act, no order preventing or suspending the use of any preliminary prospectus or the Prospectus has been issued and no proceedings for any of those purposes have been instituted or are pending or, to the Company's knowledge, contemplated; and the Company has complied with each request (if any) from the Commission for additional information to the reasonable satisfaction of counsel to the Underwriters.

(b) *Opinion of Counsel for Company.* At the Closing Time, the Representative shall have received the opinion and the negative assurance letter, each dated the Closing Time, of Baker & Hostetler LLP, counsel for the Company, together with the opinion of Marshall, Gerstein & Borun LLP, special counsel for the Company with respect to intellectual property matters, each in form and substance satisfactory to counsel for the Underwriters, together with signed or reproduced copies of each such letter for each of the other Underwriters.

(c) *Opinion of Counsel for Underwriters.* At the Closing Time, the Representative shall have received the opinion, and negative assurance letter, each dated the Closing Time, of Duane Morris LLP, counsel for the Underwriters, together with signed or reproduced copies of such letters for each of the other Underwriters in form and substance satisfactory to the Representative. In giving such opinion such counsel may rely, as to all matters governed by the laws of jurisdictions other than the law of the State of New York, the General Corporation Law of the State of Delaware and the federal securities laws of the United States, upon the opinions of counsel satisfactory to the Representative. Such counsel may also state that, insofar as such opinion involves factual matters, they have relied, to the extent they deem proper, upon certificates of officers and other representatives of the Company and its Subsidiaries and certificates of public officials.

(d) *Officers' Certificate.* At the Closing Time, there shall not have been, since the date hereof or since the respective dates as of which information is given in the Registration Statement, the General Disclosure Package or the Prospectus, any material adverse change in the condition, financial or otherwise, or in the earnings, business affairs or business prospects of the Company and its Subsidiaries considered as one enterprise, whether or not arising in the ordinary course of business, and the Representative shall have received a certificate of the principal executive officer of the Company and of the principal financial officer of the Company, dated the Closing Time, to the effect that (i) there has been no such material adverse change, (ii) the representations and warranties of the Company in this Agreement are true and correct with the same force and effect as though expressly made at and as of the Closing Time, (iii) the Company has complied with all agreements and satisfied all conditions on its part to be performed or satisfied at or prior to the Closing Time, and (iv) no stop order suspending the effectiveness of the Registration Statement under the 1933 Act has been issued, no order preventing or suspending the use of any preliminary prospectus or the Prospectus has been issued and no proceedings for any of those purposes have been instituted or are pending or, to their knowledge, contemplated.

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(e) *Accountant's Comfort Letter.* At the time of the execution of this Agreement, the Representative shall have received from BPM LLP a letter, dated such date, in form and substance satisfactory to the Representative, together with signed or reproduced copies of such letter for each of the other Underwriters containing statements and information of the type ordinarily included in accountants' "comfort letters" to underwriters with respect to the financial statements and certain financial information contained in the Registration Statement, the General Disclosure Package and the Prospectus.

(f) *Bring-down Comfort Letter.* At the Closing Time, the Representative shall have received from BPM LLP a letter, dated as of the Closing Time, to the effect that they reaffirm the statements made in the letter furnished pursuant to subsection (e) of this Section, except that the specified date referred to shall be a date not more than three business days prior to the Closing Time.

(g) *Approval of Listing.* At the Closing Time, the Securities shall have been approved for listing on the Nasdaq Capital Market, subject only to official notice of issuance.

(h) *No Objection.* FINRA has confirmed that it has not raised any objection with respect to the fairness and reasonableness of the underwriting terms and arrangements relating to the offering of the Securities.

(i) *Lock-up Agreements.* At the date of this Agreement, the Representative shall have received an agreement substantially in the form of Exhibit A hereto signed by all of the Company's directors and officers.

(j) *Maintenance of Rating.* Neither the Company nor its subsidiaries have any debt securities or preferred stock that are rated by any "nationally recognized statistical rating agency" (as defined in Section 3(a)(62) of the 1934 Act)."

(k) *[Reserved].*

(l) *Additional Documents.* At the Closing Time, counsel for the Underwriters shall have been furnished with such other documents and opinions as they may reasonably require for the purpose of enabling them to pass upon the issuance and sale of the Securities as herein contemplated, or in order to evidence the accuracy of any of the representations or warranties, or the fulfillment of any of the conditions, herein contained; and all proceedings taken by the Company in connection with the issuance and sale of the Securities as herein contemplated shall be reasonably satisfactory in form and substance to the Representative and counsel for the Underwriters.

(m) *Termination of Agreement.* If any condition specified in this Section shall not have been fulfilled when and as required to be fulfilled, this Agreement may be terminated by the Representative by notice to the Company at any time at or prior to Closing Time and such termination shall be without liability of any party to any other party except as provided in Section 4 and except that Sections 1, 4, 6, 7, 8, 14, 15 and 16 shall survive any such termination and remain in full force and effect.

#### SECTION 6. Indemnification.

(a) *Indemnification of Underwriters.* The Company agrees to indemnify and hold harmless each Underwriter, its affiliates (as such term is defined in Rule 501(b) under the 1933 Act (each, an "Affiliate")), its selling agents and each person, if any, who controls any Underwriter within the meaning of Section 15 of the 1933 Act or Section 20 of the 1934 Act as follows:

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(i) against any and all loss, liability, claim, damage and expense whatsoever, as incurred, arising out of any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement (or any amendment thereto), including any information deemed to be a part thereof pursuant to Rule 430B, or the omission or alleged omission therefrom of a material fact required to be stated therein or necessary to make the statements therein not misleading or arising out of any untrue statement or alleged untrue statement of a material fact included (A) in any preliminary prospectus, any Issuer Free Writing Prospectus, any Written Testing-the-Waters Communication, the General Disclosure Package or the Prospectus (or any amendment or supplement thereto), or (B) in any materials or information provided to investors by, or with the approval of, the Company in connection with the marketing of the offering of the Securities (“Marketing Materials”), including any roadshow or investor presentations made to investors by the Company (whether in person or electronically), or the omission or alleged omission in any preliminary prospectus, any Issuer Free Writing Prospectus, any Written Testing-the-Waters Communication, the General Disclosure Package, the Prospectus (or any amendment or supplement thereto) or in any Marketing Materials of a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading;

(ii) against any and all loss, liability, claim, damage and expense whatsoever, as incurred, to the extent of the aggregate amount paid in settlement of any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or of any claim whatsoever based upon any such untrue statement or omission, or any such alleged untrue statement or omission; provided that (subject to Section 6(d) below) any such settlement is effected with the written consent of the Company;

(iii) against any and all expense whatsoever, as incurred (including the fees and disbursements of counsel chosen by the Representative), reasonably incurred in investigating, preparing or defending against any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or any claim whatsoever based upon any such untrue statement or omission, or any such alleged untrue statement or omission, to the extent that any such expense is not paid under (i) or (ii) above;

provided, however, that this indemnity agreement shall not apply to any loss, liability, claim, damage or expense to the extent arising out of any untrue statement or omission or alleged untrue statement or omission made in the Registration Statement (or any amendment thereto), including any information deemed to be a part thereof pursuant to Rule 430B, the General Disclosure Package or the Prospectus (or any amendment or supplement thereto) in reliance upon and in conformity with the Underwriter Information.

(b) *Indemnification of Company, Directors and Officers.* Each Underwriter severally agrees to indemnify and hold harmless the Company, its directors, each of its officers who signed the Registration Statement, and each person, if any, who controls the Company within the meaning of Section 15 of the 1933 Act or Section 20 of the 1934 Act, against any and all loss, liability, claim, damage and expense described in the indemnity contained in subsection (a) of this Section, as incurred, but only with respect to untrue statements or omissions, or alleged untrue statements or omissions, made in the Registration Statement (or any amendment thereto), including any information deemed to be a part thereof pursuant to Rule 430B, the General Disclosure Package or the Prospectus (or any amendment or supplement thereto) in reliance upon and in conformity with the Underwriter Information.

(c) *Actions against Parties; Notification.* Each indemnified party shall give notice as promptly as reasonably practicable to each indemnifying party of any action commenced against it in respect of which indemnity may be sought hereunder, but failure to so notify an indemnifying party shall not relieve such indemnifying party from any liability hereunder to the extent it is not materially prejudiced as a result thereof and in any event shall not relieve it from any liability which it may have otherwise than on account of this indemnity agreement. In the case of parties indemnified pursuant to Section 6(a) above, counsel to the indemnified parties shall be selected by the Representative, and, in the case of parties indemnified pursuant to Section 6(b) above, counsel to the indemnified parties shall be selected by the Company. An indemnifying party may participate at its own expense in the defense of any such action; provided, however, that counsel to the indemnifying party shall not (except with the consent of the indemnified party) also be counsel to the indemnified party. In no event shall the indemnifying parties be liable for the reasonable fees and expenses of more than one counsel (in addition to any local counsel) separate from their own counsel for all indemnified parties in connection with any one action or separate but similar or related actions in the same jurisdiction arising out of the same general allegations or circumstances. No indemnifying party shall, without the prior written consent of the indemnified parties, settle or compromise or consent to the entry of any judgment with respect to any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or any claim whatsoever in respect of which indemnification or contribution could be sought under this Section 6 or Section 7 hereof (whether or not the indemnified parties are actual or potential parties thereto), unless such settlement, compromise or consent (i) includes an unconditional release of each indemnified party from all liability arising out of such litigation, investigation, proceeding or claim and (ii) does not include a statement as to an admission of fault, culpability or a failure to act by or on behalf of any indemnified party.

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(d) *Settlement without Consent if Failure to Reimburse.* If at any time an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for fees and expenses of counsel, such indemnifying party agrees that it shall be liable for any settlement of the nature contemplated by Section 6(a)(ii) effected without its written consent if (i) such settlement is entered into more than 45 days after receipt by such indemnifying party of the aforesaid request, (ii) such indemnifying party shall have received notice of the terms of such settlement at least 30 days prior to such settlement being entered into and (iii) such indemnifying party shall not have reimbursed such indemnified party in accordance with such request prior to the date of such settlement.

SECTION 7. Contribution. If the indemnification provided for in Section 6 hereof is for any reason unavailable to or insufficient to hold harmless an indemnified party in respect of any losses, liabilities, claims, damages or expenses referred to therein, then each indemnifying party shall contribute to the aggregate amount of such losses, liabilities, claims, damages and expenses incurred by such indemnified party, as incurred, (i) in such proportion as is appropriate to reflect the relative benefits received by the Company, on the one hand, and the Underwriters, on the other hand, from the offering of the Securities pursuant to this Agreement or (ii) if the allocation provided by clause (i) is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the Company, on the one hand, and of the Underwriters, on the other hand, in connection with the statements or omissions which resulted in such losses, liabilities, claims, damages or expenses, as well as any other relevant equitable considerations.

The relative benefits received by the Company, on the one hand, and the Underwriters, on the other hand, in connection with the offering of the Securities pursuant to this Agreement shall be deemed to be in the same respective proportions as the total net proceeds from the offering of the Securities pursuant to this Agreement (before deducting expenses) received by the Company, on the one hand, and the total underwriting discount received by the Underwriters, on the other hand, in each case as set forth on the cover of the Prospectus, bear to the aggregate initial public offering price of the Securities as set forth on the cover of the Prospectus.

The relative fault of the Company, on the one hand, and the Underwriters, on the other hand, shall be determined by reference to, among other things, whether any such untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact relates to information supplied by the Company or by the Underwriters and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission.

The Company and the Underwriters agree that it would not be just and equitable if contribution pursuant to this Section 7 were determined by pro rata allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation which does not take account of the equitable considerations referred to above in this Section 7. The aggregate amount of losses, liabilities, claims, damages and expenses incurred by an indemnified party and referred to above in this Section 7 shall be deemed to include any legal or other expenses reasonably incurred by such indemnified party in investigating, preparing or defending against any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or any claim whatsoever based upon any such untrue or alleged untrue statement or omission or alleged omission.

Notwithstanding the provisions of this Section 7, no Underwriter shall be required to contribute any amount in excess of the underwriting discounts and commissions received by such Underwriter in connection with the Securities underwritten by it and distributed to the public.

No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the 1933 Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation.

For purposes of this Section 7, each person, if any, who controls an Underwriter within the meaning of Section 15 of the 1933 Act or Section 20 of the 1934 Act and each Underwriter's Affiliates and selling agents shall have the same rights to contribution as such Underwriter, and each director of the Company, each officer of the Company who signed the Registration Statement, and each person, if any, who controls the Company within the meaning of Section 15 of the 1933 Act or Section 20 of the 1934 Act shall have the same rights to contribution as the Company. The Underwriters' respective obligations to contribute pursuant to this Section 7 are several in proportion to the number of Securities set forth opposite their respective names in Schedule A hereto and not joint.

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SECTION 8. Representations, Warranties and Agreements to Survive. All representations, warranties and agreements contained in this Agreement or in certificates of officers of the Company or any of its Subsidiaries submitted pursuant hereto, shall remain operative and in full force and effect regardless of (i) any investigation made by or on behalf of any Underwriter or its Affiliates or selling agents, any person controlling any Underwriter, its officers or directors or any person controlling the Company and (ii) delivery of and payment for the Securities.

SECTION 9. Termination of Agreement.

(a) *Termination*. The Representative may terminate this Agreement, by notice to the Company, at any time at or prior to the Closing Time (i) if there has been, in the judgment of the Representative, since the time of execution of this Agreement or since the respective dates as of which information is given in the Registration Statement, the General Disclosure Package or the Prospectus, any material adverse change in the condition, financial or otherwise, or in the earnings, business affairs or business prospects of the Company and its Subsidiaries considered as one enterprise, whether or not arising in the ordinary course of business, or (ii) if there has occurred any material adverse change in the financial markets in the United States or the international financial markets, any outbreak of hostilities or escalation thereof or other calamity or crisis or any change or development involving a prospective change in U.S. or international political, financial or economic conditions, in each case the effect of which is such as to make it, in the judgment of the Representative, impracticable or inadvisable to proceed with the completion of the offering or to enforce contracts for the sale of the Securities, or (iii) if trading in any securities of the Company has been suspended or materially limited by the Commission or the Nasdaq Capital Market, or (iv) if trading generally on the NYSE American or the New York Stock Exchange or in the Nasdaq Capital Market has been suspended or materially limited, or minimum or maximum prices for trading have been fixed, or maximum ranges for prices have been required, by any of said exchanges or by order of the Commission, FINRA or any other governmental authority, or (v) a material disruption has occurred in commercial banking or securities settlement or clearance services in the United States or with respect to Clearstream or Euroclear systems in Europe, or (vi) if a banking moratorium has been declared by either Federal or New York authorities.

(b) *Liabilities*. If this Agreement is terminated pursuant to this Section, such termination shall be without liability of any party to any other party except as provided in Section 4 hereof, and provided further that Sections 1, 4, 6, 7, 8, 15, 16 and 17 shall survive such termination and remain in full force and effect.

SECTION 10. Default by One or More of the Underwriters. If one or more of the Underwriters shall fail at the Closing Time to purchase the Securities which it or they are obligated to purchase under this Agreement (the “Defaulted Securities”), the Representative shall have the right, within 24 hours thereafter, to make arrangements for one or more of the non-defaulting Underwriters, or any other underwriters, to purchase all, but not less than all, of the Defaulted Securities in such amounts as may be agreed upon and upon the terms herein set forth; if, however, the Representative shall not have completed such arrangements within such 24-hour period, then:

(i) if the number of Defaulted Securities does not exceed 10% of the number of Securities to be purchased on such date, each of the non-defaulting Underwriters shall be obligated, severally and not jointly, to purchase the full amount thereof in the proportions that their respective underwriting obligations hereunder bear to the underwriting obligations of all non-defaulting Underwriters, or

(ii) if the number of Defaulted Securities exceeds 10% of the number of Securities to be purchased on such date, this Agreement shall terminate without liability on the part of any non-defaulting Underwriter.

No action taken pursuant to this Section shall relieve any defaulting Underwriter from liability in respect of its default.

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In the event of any such default which does not result in a termination of this Agreement, either the (i) Representative or (ii) the Company shall have the right to postpone Closing Time for a period not exceeding seven days in order to effect any required changes in the Registration Statement, the General Disclosure Package or the Prospectus or in any other documents or arrangements. As used herein, the term "Underwriter" includes any person substituted for an Underwriter under this Section 10.

SECTION 11. Notices. All notices and other communications hereunder shall be in writing and shall be deemed to have been duly given if mailed or transmitted by any standard form of telecommunication. Notices to the Underwriters shall be directed to Piper Sandler & Co., U.S. Bancorp Center, 800 Nicollet Mall, Minneapolis, Minnesota 55402, Attention: Equity Capital Markets, with a copy to Piper Sandler General Counsel at 800 Nicollet Mall, Minneapolis, MN 55402. Notices to the Company shall be directed to Monopar Therapeutics Inc., 1000 Skokie Blvd., Suite 350, Wilmette, IL.

SECTION 12. No Advisory or Fiduciary Relationship. The Company acknowledges and agrees that (a) the purchase and sale of the Securities pursuant to this Agreement, including the determination of the initial public offering price of the Securities and any related discounts and commissions, is an arm's-length commercial transaction between the Company, on the one hand, and the several Underwriters, on the other hand, (b) in connection with the offering of the Securities and the process leading thereto, each Underwriter is and has been acting solely as a principal and is not the agent or fiduciary of the Company, any of its Subsidiaries or their respective stockholders, creditors, employees or any other party, (c) no Underwriter has assumed or will assume an advisory or fiduciary responsibility in favor of the Company with respect to the offering of the Securities or the process leading thereto (irrespective of whether such Underwriter has advised or is currently advising the Company or any of its Subsidiaries on other matters) and no Underwriter has any obligation to the Company with respect to the offering of the Securities except the obligations expressly set forth in this Agreement, (d) the Underwriters and their respective affiliates may be engaged in a broad range of transactions that involve interests that differ from those of the Company and (e) the Underwriters have not provided any legal, accounting, regulatory or tax advice with respect to the offering of the Securities and the Company has consulted its own respective legal, accounting, regulatory and tax advisors to the extent it deemed appropriate.

SECTION 13. Recognition of the U.S. Special Resolution Regimes. In the event that any Underwriter that is a Covered Entity becomes subject to a proceeding under a U.S. Special Resolution Regime, the transfer from such Underwriter of this Agreement, and any interest and obligation in or under this Agreement, will be effective to the same extent as the transfer would be effective under the U.S. Special Resolution Regime if this Agreement, and any such interest and obligation, were governed by the laws of the United States or a state of the United States.

In the event that any Underwriter that is a Covered Entity or a BHC Act Affiliate of such Underwriter becomes subject to a proceeding under a U.S. Special Resolution Regime, Default Rights under this Agreement that may be exercised against such Underwriter are permitted to be exercised to no greater extent than such Default Rights could be exercised under the U.S. Special Resolution Regime if this Agreement were governed by the laws of the United States or a state of the United States.

For purposes of this Agreement, (A) "BHC Act Affiliate" has the meaning assigned to the term "affiliate" in, and shall be interpreted in accordance with, 12 U.S.C. § 1841(k); (B) "Covered Entity" means any of the following: (i) a "covered entity" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 252.82(b); (ii) a "covered bank" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 47.3(b); or (iii) a "covered FSI" as that term is defined in, and interpreted in accordance with, 12 C.F.R. § 382.2(b); (C) "Default Right" has the meaning assigned to that term in, and shall be interpreted in accordance with, 12 C.F.R. §§ 252.81, 47.2 or 382.1, as applicable; and (D) "U.S. Special Resolution Regime" means each of (i) the Federal Deposit Insurance Act and the regulations promulgated thereunder and (ii) Title II of the Dodd-Frank Wall Street Reform and Consumer Protection Act and the regulations promulgated thereunder.

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SECTION 14. Parties. This Agreement shall each inure to the benefit of and be binding upon the Underwriters and the Company and their respective successors. Nothing expressed or mentioned in this Agreement is intended or shall be construed to give any person, firm or corporation, other than the Underwriters and the Company and their respective successors and the controlling persons and officers and directors referred to in Sections 6 and 7 and their heirs and legal representatives, any legal or equitable right, remedy or claim under or in respect of this Agreement or any provision herein contained. This Agreement and all conditions and provisions hereof are intended to be for the sole and exclusive benefit of the Underwriters and the Company and their respective successors, and said controlling persons and officers and directors and their heirs and legal representatives, and for the benefit of no other person, firm or corporation. No purchaser of Securities from any Underwriter shall be deemed to be a successor by reason merely of such purchase.

SECTION 15. Waiver of Trial by Jury. The Company (on its behalf and, to the extent permitted by applicable law, on behalf of its stockholders and affiliates) and each of the Underwriters hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Agreement or the transactions contemplated hereby.

SECTION 16. GOVERNING LAW. THIS AGREEMENT AND ANY CLAIM, CONTROVERSY OR DISPUTE ARISING UNDER OR RELATED TO THIS AGREEMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF, THE STATE OF NEW YORK WITHOUT REGARD TO ITS CHOICE OF LAW PROVISIONS.

SECTION 17. Consent to Jurisdiction; Waiver of Immunity. Any legal suit, action or proceeding arising out of or based upon this Agreement or the transactions contemplated hereby shall be instituted in (i) the federal courts of the United States of America located in the City and County of New York, Borough of Manhattan or (ii) the courts of the State of New York located in the City and County of New York, Borough of Manhattan (collectively, the “Specified Courts”), and each party irrevocably submits to the exclusive jurisdiction (except for proceedings instituted in regard to the enforcement of a judgment of any such court, as to which such jurisdiction is non-exclusive) of such courts in any such suit, action or proceeding. Service of any process, summons, notice or document by mail to such party’s address set forth above shall be effective service of process for any suit, action or other proceeding brought in any such court. The parties irrevocably and unconditionally waive any objection to the laying of venue of any suit, action or other proceeding in the Specified Courts and irrevocably and unconditionally waive and agree not to plead or claim in any such court that any such suit, action or other proceeding brought in any such court has been brought in an inconvenient forum.

SECTION 18. TIME. TIME SHALL BE OF THE ESSENCE OF THIS AGREEMENT. EXCEPT AS OTHERWISE SET FORTH HEREIN, SPECIFIED TIMES OF DAY REFER TO NEW YORK CITY TIME.

SECTION 19. Partial Unenforceability. The invalidity or unenforceability of any Section, paragraph or provision of this Agreement shall not affect the validity or enforceability of any other Section, paragraph or provision hereof. If any Section, paragraph or provision of this Agreement is for any reason determined to be invalid or unenforceable, there shall be deemed to be made such minor changes (and only such minor changes) as are necessary to make it valid and enforceable.

SECTION 20. Counterparts. This Agreement may be executed in any number of counterparts (which may include counterparts delivered by any standard form of telecommunication), each of which shall be deemed to be an original, but all such counterparts shall together constitute one and the same agreement. Counterparts may be delivered via facsimile, electronic mail (including any electronic signature covered by the U.S. federal ESIGN Act of 2000, Uniform Electronic Transactions Act, the Electronic Signatures and Records Act or other applicable law, e.g., [www.docusign.com](http://www.docusign.com)) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

SECTION 21. Effect of Headings. The Section headings herein are for convenience only and shall not affect the construction hereof.

SECTION 22. Entire Agreement. This Agreement supersedes all prior agreements and understandings (whether written or oral) between the Company and the Underwriters, or any of them, with respect to the subject matter hereof.

[SIGNATURE PAGES FOLLOW]

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If the foregoing is in accordance with your understanding of our agreement, please sign and return to the Company a counterpart hereof, whereupon this instrument, along with all counterparts, will become a binding agreement among the Underwriters and the Company in accordance with its terms.

Very truly yours,

**MONOPAR THERAPEUTICS INC.**

By: /s/ Chandler D. Robinson  
Name: Chandler D. Robinson  
Title: Chief Executive Officer

CONFIRMED AND ACCEPTED  
As of the date first above written:

**PIPER SANDLER & CO.**

By: /s/ Paul Scansaroli  
Name: Paul Scansaroli  
Title: Managing Director

For themselves and as Representative of the other Underwriters named in Schedule A hereto.

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SCHEDULE A

The initial public offering price per share for the Securities shall be \$23.790.

The purchase price per share for the Securities to be paid by the several Underwriters shall be \$22.36, being an amount equal to the initial public offering price set forth above less \$1.43 per share, subject to adjustment in accordance with Section 2(b) for dividends or distributions declared by the Company and payable on the Securities.

<b>Name of Underwriter</b>	<b>Number of Securities</b>
Piper Sandler & Co.	798,655
Total	798,655

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SCHEDULE B-1

Pricing Terms

1. The Company is selling 798,655 shares of Common Stock.
  2. The initial public offering price per share for the Securities shall be \$23.790.
  3. The Company has agreed to issue to certain investors prefunded warrants to purchase 882,761 shares of common stock at a price per share of \$23.789 in a concurrent private offering, with an exercise price per share of \$0.001 (the "Prefunded Warrants").
  4. The Company has agreed to register on Form S-3 with the SEC the shares of common stock issuable upon the exercise of the Prefunded Warrants within 30 days of the Closing Date. The Prefunded Warrants do not expire.
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SCHEDULE B-2  
Free Writing Prospectuses

None.

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SCHEDULE B-3

List of Written Testing-the-Waters Communications

None.

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## FORM OF LOCK-UP AGREEMENT

December [●], 2024

Piper Sandler &amp; Co.

as Representative of the several Underwriters to be named in the  
within-mentioned Underwriting Agreement

c/o Piper Sandler & Co.  
U.S. Bancorp Center  
800 Nicollet Mall  
Minneapolis, Minnesota 55402

Re: Proposed Public Offering by Monopar Therapeutics Inc.

Dear Sir or Madam:

The undersigned, an officer and/or director, as applicable, of Monopar Therapeutics Inc., a Delaware corporation (the "**Company**"), understands that Piper Sandler & Co. (the "**Representative**") proposes to enter into an Underwriting Agreement (the "**Underwriting Agreement**") with the Company providing for the public offering (the "**Public Offering**") of shares of the Company's common stock, par value \$0.001 per share (the "**Common Stock**"). In recognition of the benefit that such an offering will confer upon the undersigned as an officer and/or director, as applicable, of the Company, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned agrees with each underwriter to be named in the Underwriting Agreement that, during the period beginning on the date hereof and ending on the date that is sixty (60) days from the date of the Underwriting Agreement (the "**Lock-Up Period**"), the undersigned will not, without the prior written consent of the Representative, (i) directly or indirectly, offer, pledge, 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 or otherwise transfer or dispose of any shares of the Company's Common Stock or any securities convertible into or exercisable or exchangeable for shares of the Common Stock, whether now owned or hereafter acquired by the undersigned or with respect to which the undersigned has or hereafter acquires the power of disposition (collectively, the "**Lock-Up Securities**"), or exercise any right with respect to the registration of any of the Lock-Up Securities, or file, cause to be filed or caused to be confidentially submitted any registration statement in connection therewith, under the Securities Act of 1933, as amended (the "**Securities Act**"), or (ii) enter into any swap or any other agreement or any transaction that transfers, in whole or in part, directly or indirectly, the economic consequence of ownership of the Lock-Up Securities, whether any such swap or transaction is to be settled by delivery of shares of the Common Stock or other securities, in cash or otherwise or (iii) publicly disclose an intention to do any of the foregoing described in clauses (i) and (ii). The undersigned further agrees that the foregoing provisions shall be equally applicable to any issuer-directed securities the undersigned may purchase in the offering.

Notwithstanding the foregoing, and subject to the conditions below, the undersigned may transfer the Lock-Up Securities without the prior written consent of the Representative, provided that (1) other than with respect to clause (v), the Representative receives a signed lock-up agreement for the balance of the

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lockup period from each donee, trustee, distributee, or transferee, as the case may be; (2) (A) in the case of clauses (ii) through (iii) below, such transfers are not dispositions for value or required to be reported with the Securities and Exchange Commission (the “SEC”) on Form 4 in accordance with Section 16 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and (B) in the case of clauses (iv) through (ix) below, any such required Form 4 filed in accordance with Section 16 of the Exchange Act shall state the reason for such transfer or the appropriate box shall be checked on any filing made pursuant to the Exchange Act, as applicable, and (3) the undersigned does not otherwise voluntarily effect any public filing or report regarding such transfers:

- (i) as a *bona fide* gift or gifts, including to any charity or education institution; or
  - (ii) to any immediate family member or to any trust for the direct or indirect benefit of the undersigned or the immediate family of the undersigned (for purposes of this lock-up agreement, “immediate family” shall mean any relationship by blood, marriage or adoption, not more remote than first cousin);
  - (iii) to the undersigned’s affiliates or to any investment fund or other entity controlled or managed by the undersigned;
  - (iv) by will or intestacy;
  - (v) to the Company in connection with the vesting, settlement or exercise of options, warrants, restricted stock units or other rights to acquire Common Stock or any security convertible into or exercisable for Common Stock of the Company by way of net exercise and/or to cover withholding tax obligations in connection with such exercise pursuant to an employee benefit plan, option, warrant or other right disclosed in the final prospectus supplement for the Public Offering, provided that any such shares issued upon the vesting, settlement or exercise of such option, warrant or other right shall be subject to the restrictions set forth herein and further provided that if the undersigned is required to file a report under Section 16(a), the undersigned shall include a statement in such report to the effect that such transfer is being made for tax withholding or cashless exercise obligations;
  - (vi) pursuant to a court order or settlement agreement related to the distribution of assets in connection with the dissolution of a marriage or civil union;
  - (vii) to the Company pursuant to agreements under which the Company has the option to repurchase such shares or a right of first refusal with respect to transfers of such shares upon termination of service of the undersigned;
  - (viii) pursuant to plan designed to satisfy the requirements of Rule 10b5-1 (a “10b5-1 Plan”) under the Exchange Act; or
  - (ix) to a *bona fide* third party pursuant to a merger, consolidation, tender offer or other similar transaction made to all holders of Common Stock and involving a Change of Control of the Company and approved by the Company’s board of directors; *provided* that, in the event that such Change of Control is not completed, the undersigned’s Lock-Up Securities shall remain subject to the restrictions contained herein, *provided* further, that any shares of Common Stock not transferred in such merger, consolidation, tender offer or similar transaction shall remain subject to the restrictions contained herein. “Change of Control” shall mean the transfer (whether by tender offer, merger, consolidation or other similar transaction), in one transaction or a series of related transactions, to a person or group of affiliated persons (other than an underwriter pursuant to the Public Offering), of the Company’s voting securities if, after such transfer, such person or group of affiliated persons would hold more than 50% of the outstanding voting securities of the Company (or the surviving entity).
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Furthermore, the undersigned may sell shares of the Common Stock on the open market following the Public Offering if and only if (i) such sales are not required to be reported in any public report or filing with the SEC, or otherwise and (ii) the undersigned does not otherwise voluntarily effect any public filing or report regarding such sales (other than a filing under Section 13 of the Exchange Act that is required to be filed during the Lock-Up Period).

In addition, the undersigned may enter into any 10b5-1 Plan; *provided* however, (i) no sale of Common Stock may be made under such 10b5-1 Plan during the Lock-Up Period and (ii) that the appropriate box shall be checked on any filing made pursuant to the Exchange Act.

The undersigned also agrees and consents to the entry of stop transfer instructions with the Company's transfer agent and registrar against the transfer of the Lock-Up Securities except in compliance with the foregoing restrictions.

The undersigned understands that, (i) if the Representative on the one hand, or the Company, on the other hand, informs the other, prior to the execution of the Underwriting Agreement, that it has determined not to proceed with the Public Offering, (ii) if the Underwriting Agreement shall terminate or be terminated prior to payment for and delivery of the securities to be sold thereunder, or (iii) the Underwriting Agreement is not executed on or before January 31, 2025, the undersigned shall be automatically released from all obligations under this agreement.

The undersigned acknowledges and agrees that the Underwriters have not provided any recommendation or investment advice nor have the Underwriters solicited any action from the undersigned with respect to the Public Offering and the undersigned has consulted their own legal, accounting, financial, regulatory and tax advisors to the extent deemed appropriate.

[Signature Page Follows]

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Very truly yours,

Signature: \_\_\_\_\_

Print Name:

*[Signature Page to Lock-Up Agreement]*

THIS WARRANT AND THE SHARES OF COMMON STOCK ISSUABLE UPON THE EXERCISE OF THIS WARRANT (THE "SECURITIES") HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR THE SECURITIES LAWS OF ANY STATE OF THE UNITED STATES. THE SECURITIES HAVE BEEN ACQUIRED FOR INVESTMENT AND MAY NOT BE SOLD, TRANSFERRED OR ASSIGNED UNLESS (I) SUCH SECURITIES HAVE BEEN REGISTERED FOR SALE PURSUANT TO THE SECURITIES ACT, (II) SUCH SECURITIES MAY BE SOLD PURSUANT TO RULE 144 UNDER THE SECURITIES ACT, (III) THE COMPANY HAS RECEIVED AN OPINION OF COUNSEL REASONABLY SATISFACTORY TO IT THAT SUCH TRANSFER MAY LAWFULLY BE MADE WITHOUT REGISTRATION UNDER THE SECURITIES ACT, OR (IV) THE SECURITIES ARE TRANSFERRED WITHOUT CONSIDERATION TO AN AFFILIATE OF SUCH HOLDER OR A CUSTODIAL NOMINEE (WHICH FOR THE AVOIDANCE OF DOUBT SHALL REQUIRE NEITHER CONSENT NOR THE DELIVERY OF AN OPINION).

PRE-FUNDED WARRANT TO PURCHASE COMMON STOCK

Number of Shares: [ ]  
(subject to adjustment)

Warrant No.: [ ] Original Issue Date: December 23, 2024

Monopar Therapeutics Inc., a Delaware corporation (the "Company"), hereby certifies that, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, [ ] or its registered assigns (the "Holder"), is entitled, subject to the terms set forth below, to purchase from the Company up to a total of [ ] shares of common stock, \$0.001 par value per share (the "Common Stock"), of the Company (each such share, a "Warrant Share" and all such shares, the "Warrant Shares") at an exercise price per share equal to \$0.001 (the "Exercise Price"), in each case as adjusted from time to time as provided in Section 9, upon surrender of this Pre-Funded Warrant to Purchase Common Stock (including any Warrants to Purchase Common Stock issued in exchange, transfer or replacement hereof, the "Warrant") at any time and from time to time on or after the date hereof (the "Original Issue Date").

1. **Definitions.** For purposes of this Warrant, the following terms shall have the following meanings:

"Affiliate" means, with respect to any Person, any other Person that, directly or indirectly through one or more intermediates, controls, is controlled by or is under common control with such Person.

"Attribution Parties" means, collectively, the following Persons and entities: (i) any direct or indirect Affiliates of the Holder, (ii) any Person acting or who could be deemed to be acting as a Group together with the Holder or any Attribution Parties and (iii) any other Persons whose beneficial ownership of the Company's Common Stock would or could be aggregated with the Holder's and/or any other Attribution Parties for purposes of Section 13(d) or Section 16 of the Exchange Act. For clarity, the purpose of the foregoing is to subject collectively the Holder and all other Attribution Parties to the Maximum Percentage.

“**Closing Sale Price**” means, for any security as of any date, the last trade price for such security on the Principal Trading Market for such security, as reported by Bloomberg Financial Markets, or, if such Principal Trading Market begins to operate on an extended hours basis and does not designate the last trade price, then the last trade price of such security prior to 4:00 P.M., New York City time, as reported by Bloomberg Financial Markets, or if the foregoing do not apply, the last trade price of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg Financial Markets. If the Closing Sale Price cannot be calculated for a security on a particular date on any of the foregoing bases, the Closing Sale Price of such security on such date shall be the fair market value as mutually determined by the Company and the Holder. All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination or other similar transaction during the applicable calculation period.

“**Commission**” means the U.S. Securities and Exchange Commission.

“**Exchange Act**” means the U.S. Securities Exchange Act of 1934, as amended, and all of the rules and regulations promulgated thereunder.

“**Group**” shall have the meaning ascribed to it in Section 13(d) of the Exchange Act, and all related rules, regulations and jurisprudence.

“**Person**” means an individual, partnership, corporation, limited liability company, business trust, joint stock company, trust, unincorporated association, joint venture or any other entity or organization.

“**Principal Trading Market**” means the national securities exchange or other trading market on which the Common Stock is primarily listed on and quoted for trading, which, as of the Original Issue Date, shall be the Nasdaq Capital Market.

“**Securities Act**” means the U.S. Securities Act of 1933, as amended, and all of the rules and regulations promulgated thereunder.

“**Standard Settlement Period**” means the standard settlement period, expressed in a number of Trading Days, for the Principal Trading Market with respect to the Common Stock that is in effect on the date of delivery of an applicable Exercise Notice, which as of the Original Issue Date was “T+1.”

“**Trading Day**” means any weekday on which the Principal Trading Market is normally open for trading.

“**Transfer Agent**” means VStock Transfer, LLC, the Company’s transfer agent and registrar for the Common Stock, and any successor appointed in such capacity.

2. **Issuance of Securities; Registration of Warrants.** The Company shall register

ownership of this Warrant, upon records to be maintained by the Company for that purpose (the “**Warrant Register**”), in the name of the record Holder (which shall include the initial Holder or, as the case may be, any assignee to which this Warrant is permissibly assigned hereunder) from time to time. The Company may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary.

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3. **Registration of Transfers.** Subject to compliance with all applicable securities laws, the Company shall, or will cause its Transfer Agent to, register the transfer of all or any portion of this Warrant in the Warrant Register, upon surrender of this Warrant, and payment for all applicable transfer taxes (if any). Upon any such registration or transfer, a new warrant to purchase Common Stock in substantially the form of this Warrant (any such new warrant, a “**New Warrant**”) evidencing the portion of this Warrant so transferred shall be issued to the transferee, and a New Warrant evidencing the remaining portion of this Warrant not so transferred, if any, shall be issued to the transferring Holder. The acceptance of the New Warrant by the transferee thereof shall be deemed the acceptance by such transferee of all of the rights and obligations in respect of the New Warrant that the Holder has in respect of this Warrant. The Company shall, or will cause its Transfer Agent to, prepare, issue and deliver at the Company’s own expense any New Warrant under this Section 3. Until due presentment for registration of transfer, the Company may treat the registered Holder hereof as the owner and holder for all purposes, and the Company shall not be affected by any notice to the contrary.

4. **Exercise of Warrants.**

(a) All or any part of this Warrant shall be exercisable by the registered Holder in any manner permitted by this Warrant (including Section 11) at any time and from time to time on or after the Original Issue Date, and such rights shall not expire.

(b) The Holder may exercise this Warrant by delivering to the Company (i) an exercise notice, in the form attached as Schedule 1 (the “**Exercise Notice**”), completed and duly signed, and (ii) payment of the Exercise Price for the number of Warrant Shares as to which this Warrant is being exercised (which may take the form of a “cashless exercise” if so indicated in the Exercise Notice pursuant to Section 10 below), and the date on which the last of such items is delivered to the Company (as determined in accordance with the notice provisions hereof) is an “**Exercise Date**.” The Holder shall not be required to deliver the original Warrant in order to effect an exercise hereunder. Execution and delivery of the Exercise Notice shall have the same effect as cancellation of the original Warrant and issuance of a New Warrant evidencing the right to purchase the remaining number of Warrant Shares, if any.

(c) The Holder and any assignee, by acceptance of this Warrant, acknowledge and agree that, by reason of the provisions of this section, following the purchase of a portion of the Warrant Shares hereunder, the number of Warrant Shares available for purchase hereunder at any given time may be less than the amount stated on the face hereof.

5. **Delivery of Warrant Shares.**

(a) Upon exercise of this Warrant, the Company shall promptly (but in no event later than the number of Trading Days comprising the Standard Settlement Period following the Exercise Date), upon the request of the Holder, cause the Transfer Agent to credit such aggregate number of shares of Common Stock specified by the Holder in the Exercise Notice and to which the Holder is entitled pursuant to such exercise (the “**Exercise Shares**”) to (i) the Holder’s or its designee’s balance account with The Depository Trust Company (“**DTC**”) through its Deposit Withdrawal At Custodian system or (ii) in book-entry form via a direct registration system (“**DRS**”) maintained by or on behalf of the Transfer Agent, in each case, so long as either (A) there is an effective registration statement permitting the issuance of the Warrant Shares to or the resale of such Warrant Shares by the Holder or (B) the Exercise Shares are eligible for resale by the Holder without volume or manner-of-sale restrictions pursuant to Rule 144 promulgated under the Securities Act (assuming cashless exercise of this Warrant). If (A) and (B) above are not true, the Company shall cause the Transfer Agent to either (i) record the Exercise Shares in the name of the Holder or its designee on the certificates reflecting the Exercise Shares with an appropriate legend regarding restriction on transferability, which shall be issued and dispatched by overnight courier to the address as specified in the Exercise Notice, and on the Company’s share register or (ii) issue such Exercise Shares in the name of the Holder or its designee in restricted book-entry form in the Company’s share register. The Holder, or any Person so designated by the Holder to receive Warrant Shares, shall be deemed to have become the holder of record of such Warrant Shares as of the Exercise Date, irrespective of the date such Warrant Shares are credited to the Holder’s DTC account, the date of the book entry positions or the date of delivery of the certificates evidencing such Exercise Shares, as the case may be.

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(b) In addition to any other rights available to the Holder, if the Company fails to cause the Transfer Agent to deliver to the Holder or its designee Exercise Shares in the manner required pursuant to Section 5(a) within the Standard Settlement Period following the Exercise Date (other than a failure caused by incorrect or incomplete information provided by Holder to the Company) and the Holder or the Holder's broker on its behalf purchases (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder anticipated receiving upon such exercise (a "Buy-In") but did not receive within the Standard Settlement Period, then the Company shall, within two Trading Days after the Holder's request and in the Holder's sole discretion, promptly honor its obligation to deliver to the Holder or its designee the Exercise Shares pursuant to Section 5(a) and pay cash to the Holder in an amount equal to the excess (if any) of the Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased in the Buy-In, less the product of (A) the number of shares of Common Stock purchased in the Buy-In, times (B) the Closing Sale Price of a share of Common Stock on the Exercise Date. The Holder shall provide the Company written notice promptly after the occurrence of a Buy-In, indicating the amounts payable to the Holder in respect of the Buy-In together with applicable confirmations and other evidence reasonably requested by the Company.

(c) To the extent permitted by law and subject to Section 5(b), the Company's obligations to issue and deliver Warrant Shares in accordance with and subject to the terms hereof (including the limitations set forth in Section 11 below) are absolute and unconditional, irrespective of any action or inaction by the 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 the Holder or any other Person of any obligation to the Company or any violation or alleged violation of law by the Holder or any other Person, and irrespective of any other circumstance that might otherwise limit such obligation of the Company to the Holder in connection with the issuance of Warrant Shares. Subject to Section 5(b), nothing herein shall limit the 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 to the Company's failure to timely deliver Exercise Shares; provided, however, that the Holder shall not be entitled to both (i) require the Company to reinstate the portion of the Warrant and equivalent number of Warrant Shares for which such exercise was not timely honored and (ii) receive the number of shares of Common Stock that would have been issued if the Company had timely complied with its delivery requirements under Section 5(a).

**6. Charges, Taxes and Expenses.** Issuance and delivery of Exercise Shares shall be made without charge to the Holder for any issue or transfer tax, transfer agent fee or other incidental tax or expense (excluding any applicable stamp duties) in respect of the issuance of such shares, all of which taxes and expenses shall be paid by the Company; provided, however, that the Company shall not be required to pay any tax that may be payable in respect of any transfer involved in the registration of any Warrant Shares or the Warrants in a name other than that of the Holder or an Affiliate thereof. The Holder shall be responsible for all other tax liability that may arise as a result of holding or transferring this Warrant or receiving Warrant Shares upon exercise hereof.

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**7. Replacement of Warrant.** If this Warrant is mutilated, lost, stolen or destroyed, the Company shall issue or cause to be issued in exchange and substitution for and upon cancellation hereof, or in lieu of and substitution for this Warrant, a New Warrant, but only upon receipt of evidence reasonably satisfactory to the Company of such loss, theft or destruction (in such case) and, in each case, a customary and reasonable contractual indemnity, if requested by the Company. If a New Warrant is requested as a result of a mutilation of this Warrant, then the Holder shall deliver such mutilated Warrant to the Company as a condition precedent to the Company's obligation to issue the New Warrant.

**8. Reservation of Warrant Shares.** The Company covenants that it will, at all times while this Warrant is outstanding, reserve and keep available out of the aggregate of its authorized but unissued and otherwise unreserved Common Stock, solely for the purpose of enabling it to issue Warrant Shares upon exercise of this Warrant as herein provided, the number of Warrant Shares that are initially issuable and deliverable upon the exercise of this entire Warrant, free from preemptive rights or any other contingent purchase rights of persons other than the Holder (taking into account the adjustments and restrictions of Section 9). The Company covenants that all Warrant Shares so issuable and deliverable shall, upon issuance and the payment of the applicable Exercise Price in accordance with the terms hereof, be duly and validly authorized, issued and fully paid and non-assessable. The Company will take all such action as may be reasonably necessary to assure that such shares of Common Stock may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of any securities exchange or automated quotation system upon which the Common Stock may be listed. The Company further covenants that it will not, without the prior written consent of the Holder, take any actions to increase the par value of the Common Stock at any time while this Warrant is outstanding.

**9. Certain Adjustments.** The Exercise Price and number of Warrant Shares issuable upon exercise of this Warrant (the "Number of Warrant Shares") are subject to adjustment from time to time as set forth in this Section 9.

(a) Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding, (i) pays a stock dividend on its Common Stock or otherwise makes a distribution on any class of capital stock issued and outstanding on the Original Issue Date and in accordance with the terms of such stock on the Original Issue Date or as amended, that is payable in shares of Common Stock, (ii) subdivides its outstanding shares of Common Stock into a larger number of shares of Common Stock, (iii) combines its outstanding shares of Common Stock into a smaller number of shares of Common Stock or (iv) issues by reclassification of shares of capital stock any additional shares of Common Stock of the Company, then in each such case the Number of Warrant Shares shall be multiplied by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding immediately after such event and the denominator of which shall be the number of shares of Common Stock outstanding immediately before such event. Any adjustment made pursuant to clause (i) of this paragraph shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution, provided, however, that if such record date shall have been fixed and such dividend is not fully paid on the date fixed therefor, the Number of Warrant Shares shall be recomputed accordingly as of the close of business on such record date and thereafter the Number of Warrant Shares shall be adjusted pursuant to this paragraph as of the time of actual payment of such dividends. Any adjustment pursuant to clause (ii), (iii) or (iv) of this paragraph shall become effective immediately after the effective date of such subdivision, combination or issuance.

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(b) Pro Rata Distributions. If, on or after the Original Issue Date, the Company shall declare or make any dividend or other pro rata distribution of its assets (or rights to acquire its assets) to holders of shares of Common Stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property, options, evidence of indebtedness or any other assets by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction, but, for the avoidance of doubt, excluding any distribution of shares of Common Stock subject to Section 9(a), any distribution of Purchase Rights (as defined below) subject to Section 9(c) and any Fundamental Transaction (as defined below) subject to Section 9(d)) (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 exercise of this Warrant (without regard to any limitations or restrictions on exercise of this Warrant, including without limitation, the Maximum Percentage (as defined below)) immediately before the date on 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 Common Stock are to be determined for the participation in such Distribution (provided, that to the extent that the Holder’s right to participate in any such Distribution would result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, then the Holder shall not be entitled to participate in such Distribution to such extent (and shall not be entitled to beneficial ownership of such shares of Common Stock as a result of such Distribution (and beneficial ownership) to such extent) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time or times as its right thereto would not result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, at which time or times the Holder shall be granted such Distribution (and any Distributions declared or made on such initial Distribution or on any subsequent Distribution held similarly in abeyance) to the same extent as if there had been no such limitation).

(c) Purchase Rights. If at any time on or after the Original Issue Date, the Company grants, issues or sells any Options, Convertible Securities or rights to purchase stock, warrants, securities or other property, in each case pro rata to the record holders of any class of Common Stock (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 exercise of this Warrant (without regard to any limitations or restrictions on exercise of this Warrant, including without limitation, the Maximum Percentage) 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 Common Stock are to be determined for the grant, issuance or sale of such Purchase Rights (provided, that to the extent that the Holder’s right to participate in any such Purchase Right would result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, then the Holder shall not be entitled to participate in such Purchase Right to such extent (and shall not be entitled to beneficial ownership of such Common Stock as a result of such Purchase Right (and beneficial ownership) to such extent) and at the Holder’s election, in its sole discretion, either (1) such Purchase Right to such extent shall be held in abeyance for the benefit of the Holder until such time or times as its right thereto would not result in the Holder and the other Attribution Parties exceeding the Maximum Percentage, at which time or times the Holder shall be granted such right (and any Purchase Right granted, issued or sold on such initial Purchase Right or on any subsequent Purchase Right to be held similarly in abeyance) to the same extent as if there had been no such limitation or (2) the Company shall offer the Holder the right upon exercise of such Purchase Right to acquire a security (e.g. a pre-funded warrant) that would not result in the Holder and the other Attribution Parties exceeding the Maximum Percentage but will otherwise to the extent possible have economic and other rights, preferences and privileges substantially consistent and on par with the securities or other property issuable upon exercise of the originally offered Purchase Rights). As used in this Section 9(c), (i) “Options” means any rights, warrants or options to subscribe for or purchase shares of Common Stock or Convertible Securities and (ii) “Convertible Securities” mean any stock or securities (other than Options) directly or indirectly convertible into or exercisable or exchangeable for shares of Common Stock.

(d) Fundamental Transactions. If, at any time while this Warrant is outstanding (i) the Company effects any merger or consolidation of the Company with or into another Person, in which the Company is not the surviving entity or in which the stockholders of the Company immediately prior to such merger or consolidation do not own, directly or indirectly, at least 50% of the voting power of the surviving entity immediately after such merger or consolidation, (ii) the Company effects any sale to another Person of all or substantially all of its assets in one or a series of related transactions, (iii) pursuant to any tender offer or exchange offer (whether by the Company or another Person), holders of capital stock tender shares representing more than 50% of the voting power of the capital stock of the Company and the Company or such other Person, as applicable, accepts such tender for payment, (iv) the Company consummates a stock purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with another Person whereby such other Person acquires more than 50% of the voting power of the capital stock of the Company (except for any such transaction in which the stockholders of the Company immediately prior to such transaction maintain, in substantially the same proportions, the voting power of such Person immediately after the transaction) or (v) the Company effects any reclassification of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property (other than as a result of a subdivision or combination of shares of Common Stock covered by Section 9(a) above) (in any such case, a “**Fundamental Transaction**”), then following such Fundamental Transaction the Holder shall have the right to receive, upon exercise of this Warrant, the same amount and kind of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of the number of Warrant Shares then issuable upon exercise in full of this Warrant (including any Distributions or Purchase Rights then held in abeyance pursuant to Sections 9(b) or 9(c) above) without regard to any limitations on exercise contained herein (the “**Alternate Consideration**”). The Company shall not effect any Fundamental Transaction in which the Company is not the surviving entity or the Alternate Consideration includes securities of another Person unless (i) the Alternate Consideration is solely cash and the Company provides for the simultaneous “cashless exercise” of this Warrant pursuant to Section 10 below or (ii) prior to or simultaneously with the consummation thereof, any successor to the Company, surviving entity or other Person (including any purchaser of assets of the Company) shall assume the obligation to deliver to the Holder such Alternate Consideration as, in accordance with the foregoing provisions, the Holder may be entitled to receive, and the other obligations under this Warrant. The provisions of this paragraph (d) shall similarly apply to subsequent transactions analogous to a Fundamental Transaction type.

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(e) Number of Warrant Shares. Simultaneously with any adjustment to the Number of Warrant Shares pursuant to Section 9, the Exercise Price shall be increased or decreased proportionately, so that after such adjustment the aggregate Exercise Price payable hereunder for the increased or decreased Number of Warrant Shares shall be the same as the aggregate Exercise Price in effect immediately prior to such adjustment. Notwithstanding the foregoing, in no event may the Exercise Price be adjusted below the par value of the Common Stock then in effect.

(f) Calculations. All calculations under this Section 9 shall be made to the nearest one-tenth of one cent or the nearest share, as applicable.

(g) Notice of Adjustments. Upon the occurrence of each adjustment pursuant to this Section 9, the Company at its expense will, at the written request of the Holder, promptly compute such adjustment, in good faith, in accordance with the terms of this Warrant and prepare a certificate setting forth such adjustment, including a statement of the adjusted Exercise Price and adjusted number or type of Warrant Shares or other securities issuable upon exercise of this Warrant (as applicable), describing the transactions giving rise to such adjustments and showing in detail the facts upon which such adjustment is based. Upon written request, the Company will promptly deliver a copy of each such certificate to the Holder and to the Company's transfer agent.

(h) Notice of Corporate Events. If, while this Warrant is outstanding, the Company (i) declares a dividend or any other distribution of cash, securities or other property in respect of its Common Stock, including, without limitation, any granting of rights or warrants to subscribe for or purchase any capital stock of the Company or any subsidiary, (ii) authorizes or approves, enters into any agreement contemplating or solicits stockholder approval for any Fundamental Transaction or (iii) authorizes the voluntary dissolution, liquidation or winding up of the affairs of the Company, then the Company shall deliver to the Holder a notice of such transaction at least ten days prior to the applicable record or effective date on which a Person would need to hold Common Stock in order to participate in or vote with respect to such transaction; provided, however, that the failure to deliver such notice or any defect therein shall not affect the validity of the corporate action required to be described in such notice. In addition, if while this Warrant is outstanding, the Company authorizes or approves, enters into any agreement contemplating or solicits stockholder approval for any Fundamental Transaction contemplated by Section 9(d), other than a Fundamental Transaction under clause (iii) of Section 9(d), the Company shall deliver to the Holder a notice of such Fundamental Transaction at least 30 days prior to the date such Fundamental Transaction is consummated. Holder agrees to maintain any information disclosed pursuant to this Section 9(h) in confidence until such information is publicly available, and shall comply with applicable law with respect to trading in the Company's securities following receipt of any such information.

**10. Payment of Exercise Price**. Notwithstanding anything contained herein to the

contrary, the Holder may, in its sole discretion, satisfy its obligation to pay the Exercise Price through a "cashless exercise", in which event the Company shall issue to the Holder the number of Warrant Shares in an exchange of securities effected pursuant to Section 3(a)(9) of the Securities Act, determined as follows:

$$X = Y [(A-B)/A]$$

where:

"X" equals the number of Warrant Shares to be issued to the Holder;

"Y" equals the total number of Warrant Shares with respect to which this Warrant is then being exercised;

"A" equals the Closing Sale Price of the shares of Common Stock as of the Trading Day on the date immediately preceding the Exercise Date; and

"B" equals the Exercise Price then in effect for the applicable Warrant Shares at the time of such exercise.

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For purposes of Rule 144 promulgated under the Securities Act, it is intended, understood and acknowledged that the Warrant Shares issued in a “cashless exercise” transaction shall be deemed to have been acquired by the Holder, and the holding period for the Warrant Shares shall be deemed to have commenced, on the Original Issuance Date (provided that the Commission continues to take the position that such treatment is proper at the time of such exercise). In the event that a registration statement registering the issuance of Warrant Shares is, for any reason, not effective at the time of exercise of this Warrant, then this Warrant may only be exercised through a cashless exercise, as set forth in this [Section 10](#). If the Warrant Shares are issued in such a cashless exercise, the Company acknowledges and agrees that, in accordance with Section 3(a)(9) of the Securities Act, the Exercise Shares issued in such exercise shall take on the registered characteristics of the Warrants being exercised and may be tacked on to the holding period of the Warrants being exercised. Except as set forth in [Section 5\(b\)](#) (buy-in remedy) and [Section 12](#) (No Fractional Shares), in no event will the exercise of this Warrant be settled in cash.

#### 11. Limitations on Exercise.

(a) Notwithstanding anything to the contrary contained herein, the Company shall not effect the exercise of any portion of this Warrant, and the Holder of this Warrant shall not exercise any portion of the Warrant, and any such exercise shall be null and void ab initio and treated as if the exercise had not been made, to the extent that immediately prior to or following such exercise, the Holder, together with the Attribution Parties, beneficially owns or would beneficially own as determined in accordance with Section 13(d) of the Exchange Act and the rules promulgated thereunder, in excess of 9.99% (the “**Maximum Percentage**”) of the Common Stock that would be issued and outstanding following such exercise. For purposes of calculating beneficial ownership for determining whether the Maximum Percentage is or will be exceeded, the aggregate number of shares of Common Stock held and/or beneficially owned by the Holder together with the Attribution Parties, shall include the number of shares of Common Stock held and/or beneficially owned by the Holder together with the Attribution Parties plus the number of shares of Common Stock issuable upon exercise of the relevant Warrant with respect to which the determination is being made but shall exclude the number of shares of Common Stock which would be issuable upon (i) exercise of the remaining, unexercised Warrant held and/or beneficially owned by the Holder or the Attribution Parties and (ii) exercise or conversion of the unexercised or unconverted portion of any other securities of the Company held and/or beneficially owned by such Holder or any Attribution Party (including, without limitation, any convertible notes, convertible stock or warrants) that are subject to a limitation on conversion or exercise analogous to the limitation contained herein. For purposes of this [Paragraph 11\(a\)](#), beneficial ownership of the Holder or the Attribution Parties shall, except as set forth in the immediately preceding sentence, be calculated and determined in accordance with Section 13(d) of the Exchange Act and the rules promulgated thereunder. For purposes of this Warrant, in determining the number of outstanding shares of Common Stock, a Holder of this Warrant may rely on the number of outstanding shares of Common Stock as reflected in (1) the Company’s most recent Form 10-K, Form 10-Q, Current Report on Form 8-K or other public filing with the Securities and Exchange Commission, as the case may be, (2) a more recent public announcement by the Company or (3) any other notice by the Company or the Company’s transfer agent setting forth the number of shares of Common Stock outstanding (such issued and outstanding shares, the “**Reported Outstanding Share Number**”). For any reason at any time, upon the written or oral request of the Holder, the Company shall within one Trading Day confirm orally and in writing or by electronic mail to the Holder the number of shares of Common Stock then outstanding. The Holder shall disclose to the Company the number of shares of Common Stock that it, together with the Attribution Parties holds and/or beneficially owns and has the right to acquire through the exercise of derivative securities and any limitations on exercise or conversion analogous to the limitation contained herein contemporaneously or immediately prior to submitting an Exercise Notice for the relevant Warrant. If the Company receives an Exercise Notice from the Holder at a time when the actual number of outstanding shares of Common Stock is less than the Reported Outstanding Share Number, the Company shall (i) notify the Holder in writing of the number of shares of Common Stock then outstanding and, to the extent that such Exercise Notice would otherwise cause the Holder’s, together with the Attribution Parties’, beneficial ownership, as determined pursuant to this [Section 11\(a\)](#), to exceed the Maximum Percentage, the Holder must notify the Company of a reduced number of Warrant Shares to be purchased pursuant to such Exercise Notice (the number of shares by which such purchase is reduced, the “**Reduction Shares**”) and (ii) as soon as reasonably practicable, the Company shall return to the Holder any exercise price paid by the Holder for the Reduction Shares. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder and the Attribution Parties since the date as of which the Reported Outstanding Share Number was reported. In the event that the issuance of Common Stock to the Holder upon exercise of this Warrant results in the Holder, together with the Attribution Parties, being deemed to beneficially own, in the aggregate, more than the Maximum Percentage of the number of outstanding shares of Common Stock (as determined under Section 13(d) of the Exchange Act), the number of shares so issued by which the Holder’s, together with the Attribution Parties’, aggregate beneficial ownership exceeds the Maximum Percentage (the “**Excess Shares**”) shall be deemed null and void and shall be cancelled ab initio, and the Holder and/or the Attribution Parties shall not have the power to vote or to transfer the Excess Shares. As soon as reasonably practicable after the issuance of the Excess Shares has been deemed null and void, the Company shall return to the Holder the exercise price paid by the Holder for the Excess Shares. By written notice to the Company, a Holder of this Warrant may from time to time increase or decrease the Maximum Percentage to any other percentage not in excess of 19.99% specified in such notice; provided that any increase in the Maximum Percentage will not be effective until the 61st day after such notice is delivered to the Company and shall not negatively affect any partial exercise effected prior to such change.

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(b) This Section 11 shall not restrict the number of shares of Common Stock which a Holder or the Attribution Parties may receive or beneficially own in order to determine the amount of securities or other consideration that such Holder or the Attribution Parties may receive in the event of a Fundamental Transaction as contemplated in Section 9(c) of this Warrant. For purposes of clarity, the shares of Common Stock issuable pursuant to the terms of this Warrant in excess of the Maximum Percentage shall not be deemed to be beneficially owned by the Holder or the Attribution Parties for any purpose including for purposes of Section 13(d) of the Exchange Act and the rules promulgated thereunder or Section 16 of the Exchange Act and the rules promulgated thereunder, including Rule 16a-1(a)(1). No prior inability to exercise this Warrant pursuant to this paragraph shall have any effect on the applicability of the provisions of this paragraph with respect to any subsequent determination of exercisability. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 11 to the extent necessary to correct this paragraph or any portion of this paragraph which may be defective or inconsistent with the intended beneficial ownership limitation contained in this Section 11 or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitation contained in this paragraph may not be waived and shall apply to a successor holder of this Warrant.

**12. No Fractional Shares.** No fractional Warrant Shares will be issued in connection with any exercise of this Warrant. In lieu of any fractional shares that would otherwise be issuable, the number of Warrant Shares to be issued shall be rounded down to the next whole number and the Company shall pay the Holder in cash the fair market value (based on the Closing Sale Price) for any such fractional shares.

**13. Notices.** Any and all notices or other communications or deliveries hereunder (including, without limitation, any Exercise Notice) shall be in writing and shall be deemed given and effective on the earliest of (i) the date of transmission, if such notice or communication is delivered confirmed e-mail at the e-mail address specified by the Company prior to 5:30 P.M., New York City time, on a Trading Day, (ii) the next Trading Day after the date of transmission, if such notice or communication is delivered via confirmed e-mail at the e-mail address specified by the Company on a day that is not a Trading Day or later than 5:30 P.M., New York City time, on any Trading Day, (iii) the Trading Day following the date of mailing, if sent by nationally recognized overnight courier service specifying next business day delivery, or (iv) upon actual receipt by the Person to whom such notice is required to be given, if by hand delivery.

**14. Warrant Agent.** The Company shall initially serve as warrant agent under this Warrant. Upon 30 days' notice to the Holder, the Company may appoint a new warrant agent. Any corporation into which the Company or any new warrant agent may be merged or any corporation resulting from any consolidation to which the Company or any new warrant agent shall be a party or any corporation to which the Company or any new warrant agent transfers substantially all of its corporate trust or shareholders services business shall be a successor warrant agent under this Warrant without any further act. Any such successor warrant agent shall promptly cause notice of its succession as warrant agent to be mailed (by first class mail, postage prepaid) to the Holder at the Holder's last address as shown on the Warrant Register.

**15. Miscellaneous.**

(a) No Rights as a Stockholder. Except as otherwise set forth in this Warrant, the Holder, solely in such Person's capacity as a holder of this Warrant, shall not be entitled to vote or receive dividends or be deemed the holder of share capital of the Company for any purpose, nor shall anything contained in this Warrant be construed to confer upon the Holder, solely in such Person's capacity as the Holder of this Warrant, any of the rights of a stockholder of the Company or any right to vote, give or withhold consent to any corporate action (whether any reorganization, issue of stock, reclassification of stock, consolidation, merger, amalgamation, conveyance or otherwise), receive notice of meetings, receive dividends or subscription rights, or otherwise, prior to the issuance to the Holder of the Warrant Shares which such Person is then entitled to receive upon the due exercise of this Warrant. In addition, nothing contained in this Warrant shall be construed as imposing any liabilities on the Holder to purchase any securities (upon exercise of this Warrant or otherwise) or as a stockholder of the Company, whether such liabilities are asserted by the Company or by creditors of the Company.

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(b) Further Assurances. Except and to the extent as waived or consented to by the Holder, the Company shall not by any action, including, without limitation, amending its certificate or articles of incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder as set forth in this Warrant against impairment. Without limiting the generality of the foregoing, the Company will (a) not increase the par value of any Warrant Shares above the amount payable therefor upon such exercise immediately prior to such increase in par value, (b) take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and non-assessable Warrant Shares upon the exercise of this Warrant, and (c) use commercially reasonable efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof as may be necessary to enable the Company to perform its obligations under this Warrant. Before taking any action which would result in an adjustment in the number of Warrant Shares for which this Warrant is exercisable or in the Exercise Price, the Company shall obtain all such authorizations or exemptions thereof, or consents thereto, as may be necessary from any public regulatory body or bodies having jurisdiction thereof.

(c) Successors and Assigns. Subject to compliance with applicable securities laws, this Warrant may be assigned by the Holder. This Warrant may not be assigned by the Company without the written consent of the Holder, except to a successor in the event of a Fundamental Transaction. This Warrant shall be binding on and inure to the benefit of the Company and the Holder and their respective successors and assigns. Subject to the preceding sentence, nothing in this Warrant shall be construed to give to any Person other than the Company and the Holder any legal or equitable right, remedy or cause of action under this Warrant.

(d) Amendment and Waiver. This Warrant may be amended only in writing signed by the Company and the Holder, or their successors and assigns. Except as otherwise provided herein, the Company may take any action herein prohibited, or omit to perform any act herein required to be performed by it, only if the Company has obtained the written consent of the Holder.

(e) Acceptance. Receipt of this Warrant by the Holder shall constitute acceptance of and agreement to all of the terms and conditions contained herein.

( f ) Governing Law; Jurisdiction. ALL QUESTIONS CONCERNING THE CONSTRUCTION, VALIDITY, ENFORCEMENT AND INTERPRETATION OF THIS WARRANT SHALL BE GOVERNED BY AND CONSTRUED AND ENFORCED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK WITHOUT REGARD TO THE PRINCIPLES OF CONFLICTS OF LAW THEREOF. EACH OF THE COMPANY AND THE HOLDER HEREBY IRREVOCABLY SUBMITS TO THE EXCLUSIVE JURISDICTION OF THE STATE AND FEDERAL COURTS SITTING IN THE CITY OF NEW YORK, BOROUGH OF MANHATTAN, FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION HERewith OR WITH ANY TRANSACTION CONTEMPLATED HEREBY OR DISCUSSED HEREIN (INCLUDING WITH RESPECT TO THE ENFORCEMENT OF ANY OF THE TRANSACTION DOCUMENTS), AND HEREBY IRREVOCABLY WAIVES, AND AGREES NOT TO ASSERT IN ANY SUIT, ACTION OR PROCEEDING, ANY CLAIM THAT IT IS NOT PERSONALLY SUBJECT TO THE JURISDICTION OF ANY SUCH COURT. EACH OF THE COMPANY AND THE HOLDER HEREBY IRREVOCABLY WAIVES PERSONAL SERVICE OF PROCESS AND CONSENTS TO PROCESS BEING SERVED IN ANY SUCH SUIT, ACTION OR PROCEEDING BY MAILING A COPY THEREOF VIA REGISTERED OR CERTIFIED MAIL OR OVERNIGHT DELIVERY (WITH EVIDENCE OF DELIVERY) TO SUCH PERSON AT THE ADDRESS IN EFFECT FOR NOTICES TO IT AND AGREES THAT SUCH SERVICE SHALL CONSTITUTE GOOD AND SUFFICIENT SERVICE OF PROCESS AND NOTICE THEREOF. NOTHING CONTAINED HEREIN SHALL BE DEEMED TO LIMIT IN ANY WAY ANY RIGHT TO SERVE PROCESS IN ANY MANNER PERMITTED BY LAW. EACH OF THE COMPANY AND THE HOLDER HEREBY WAIVES ALL RIGHTS TO A TRIAL BY JURY.

(g) Headings. The headings herein are for convenience only, do not constitute a part of this Warrant and shall not be deemed to limit or affect any of the provisions hereof.

(h) Severability. If any part or provision of this Warrant is held unenforceable or in conflict with the applicable laws or regulations of any jurisdiction, the invalid or unenforceable part or provisions shall be replaced with a provision which accomplishes, to the extent possible, the original business purpose of such part or provision in a valid and enforceable manner, and the remainder of this Warrant shall remain binding upon the parties hereto.

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IN WITNESS WHEREOF, the Company has caused this Warrant to be duly executed by its authorized officer as of the date first indicated above.

**MONOPAR THERAPEUTICS INC.**

By: \_\_\_\_\_

Name:

Title:

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**SCHEDULE 1**

**FORM OF EXERCISE NOTICE**

[To be executed by the Holder to purchase shares of Common Stock under the Warrant]

Ladies and Gentlemen:

(1) The undersigned is the Holder of Warrant No. \_\_ (the "Warrant") issued by Monopar Therapeutics, Inc., a Delaware corporation (the "Company"). Capitalized terms used herein and not otherwise defined herein have the respective meanings set forth in the Warrant.

(2) The undersigned hereby exercises its right to purchase \_\_\_\_\_ Warrant Shares pursuant to the Warrant.

(3) The Holder intends that payment of the Exercise Price shall be made as (check one):

- Cash Exercise
- "Cashless Exercise" under Section 10 of the Warrant

(4) If the Holder has elected a Cash Exercise, the Holder shall pay the sum of \$ \_\_\_\_\_ in immediately available funds to the Company in accordance with the terms of the Warrant.

(5) Pursuant to this Exercise Notice, the Company shall deliver to the Holder Warrant Shares determined in accordance with the terms of the Warrant. The Warrant Shares shall be delivered (check one):

- to the following DWAC Account Number: \_\_\_\_\_
- in book-entry form via a direct registration system
- by physical delivery of a certificate to: \_\_\_\_\_
- in restricted book-entry form in the Company's share register \_\_\_\_\_

(6) By its delivery of this Exercise Notice, the undersigned represents and warrants to the Company that in giving effect to the exercise evidenced hereby the Holder (i) the Holder is an "accredited investor" as defined in Regulation D promulgated under the Securities Act of 1933, as amended and (ii) will not beneficially own in excess of the number of shares of Common Stock (as determined in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended) permitted to be owned under Section 11(a) of the Warrant to which this notice relates.

Dated: \_\_\_\_\_

Name of Holder: \_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

(Signature must conform in all respects to name of Holder as specified on the face of the Warrant)



December 23, 2024

Monopar Therapeutics Inc.  
1000 Skokie Blvd, Suite 350  
Wilmette, IL 60091

Ladies and Gentlemen:

We have acted as counsel to Monopar Therapeutics Inc., a Delaware corporation (the “*Company*”), in connection with the preparation and filing with the Securities and Exchange Commission (the “*Commission*”) of a Prospectus Supplement, dated December 20, 2024 (the “*Prospectus Supplement*”), to a Prospectus (the “*Prospectus*”) filed as part of a Registration Statement on Form S-3, Registration No. 333-268935 (the “*Registration Statement*”) that became effective on January 4, 2023, pursuant to which the Company is offering for sale under the Securities Act of 1933, as amended (the “*Securities Act*”), 798,655 shares (the “*Shares*”) of common stock, par value \$0.001 per share (the “*Common Stock*”). This opinion is being rendered in connection with the filing of the Prospectus Supplement with the Commission. All capitalized terms used herein and not otherwise defined shall have the respective meanings given to them in the Registration Statement.

We have examined copies of such agreements, instruments and documents as we have deemed an appropriate basis on which to render the opinions hereinafter expressed. In our examination of the aforesaid documents, we have assumed the genuineness of all signatures, the legal capacity of all natural persons, the accuracy and completeness of all documents submitted to us, the authenticity of all original documents, and the conformity to authentic original documents of all documents submitted to us as copies (including telecopies). As to all matters of fact, we have relied on the representations and statements of fact made in the documents so reviewed, and we have not independently established the facts so relied on. This opinion letter is given, and all statements herein are made, in the context of the foregoing.

Based upon the foregoing, and subject to the limitations set forth below, we are of the opinion that the Shares, when sold and issued, upon payment therefor, in the manner contemplated by the Prospectus Supplement, will be validly issued, fully paid and nonassessable.

The opinions expressed herein are limited to the General Corporation Law of the State of Delaware and we express no opinion as to the effect on the matters covered by this letter of the laws of any other jurisdiction.

We have relied as to certain matters on information obtained from public officials, officers of the Company, and other sources believed by us to be responsible.

We hereby consent to the filing of this letter as Exhibit 5.1 to a Current Report on Form 8-K that will be filed by the Company and incorporated by reference into the Registration Statement and to the reference to our firm in the Prospectus Supplement under the heading “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/ Baker & Hostetler LLP

BAKER & HOSTETLER LLP

## SECURITIES PURCHASE AGREEMENT

This SECURITIES PURCHASE AGREEMENT (this "*Agreement*") is dated as of December 20, 2024, by and among MONOPAR THERAPEUTICS INC., a Delaware corporation (the "*Company*"), and each purchaser identified on Annex A hereto (each, including its successors and assigns, a "*Purchaser*" and collectively, the "*Purchasers*").

## RECITALS

A. The Company and each Purchaser is executing and delivering this Agreement in reliance upon the exemption from securities registration afforded by Section 4(a)(2) of the Securities Act of 1933, as amended (the "*Securities Act*"), and Rule 506 of Regulation D ("*Regulation D*") as promulgated by the United States Securities and Exchange Commission (the "*Commission*") under the Securities Act.

B. Each Purchaser, severally and not jointly, wishes to purchase, and the Company wishes to issue and sell, upon the terms and conditions stated in this Agreement, an aggregate of 882,761 pre-funded warrants, substantially in the form attached hereto as Exhibit E (the "*Pre-Funded Warrants*" or the "*Securities*") to acquire up to 882,761 shares of the Company's common stock, par value \$0.001 per share ("*Common Stock*"), at a per Pre-Funded Warrant purchase price equal to the Per Pre-Funded Warrant Purchase Price and with an exercise price of \$0.001 per share, in accordance with the terms and provisions of this Agreement, for an aggregate purchase price of approximately \$21 million.

C. Prior to the Closing, the parties hereto shall execute and deliver a Registration Rights Agreement, substantially in the form attached hereto as Exhibit A (the "*Registration Rights Agreement*"), pursuant to which, among other things, the Company will agree to provide certain registration rights with respect to the Warrant Shares under the Securities Act and the rules and regulations promulgated thereunder and applicable state securities laws.

D. The Company has engaged Piper Sandler & Co. as its placement agent (the "*Placement Agent*") for the offering of the Securities on a "best efforts" basis.

NOW, THEREFORE, IN CONSIDERATION of the mutual covenants contained in this Agreement, and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the Company and each Purchaser, severally and not jointly, hereby agree as follows:

ARTICLE I  
DEFINITIONS

**Section 1.1 Definitions.** In addition to the terms defined elsewhere in this Agreement, for all purposes of this Agreement, the following terms shall have the meanings indicated in this Section 1.1:

"*Acquiring Person*" has the meaning set forth in Section 4.5.

"*Action*" means any action, suit, inquiry, notice of violation, proceeding (including any partial proceeding such as a deposition) or investigation pending or, to the Company's Knowledge, threatened against the Company or any of their respective properties or any officer, director or employee of the Company acting in his or her capacity as an officer, director or employee before or by any federal, state, county, local or foreign court, arbitrator, governmental or administrative agency, regulatory authority, stock market, stock exchange or trading facility.

"*Affiliate*" means, with respect to any Person, any other Person that, directly or indirectly through one or more intermediaries, Controls, is controlled by or is under common control with such Person, as such terms are used in and construed under Rule 405 under the Securities Act.

"*Agreement*" has the meaning set forth in the Preamble.

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**“Board of Directors”** means the board of directors of the Company.

**“Business Day”** means any day except Saturday, Sunday, any day which is a federal legal holiday in the United States or any day on which banking institutions in the State of New York are authorized or required by law or other governmental action to close.

**“Closing”** has the meaning set forth in Section 2.2(a).

**“Closing Date”** means the first (1st) Trading Day following the date hereof, or such other date when all of the Transaction Documents have been executed and delivered by the applicable parties thereto, and all of the conditions set forth in Sections 2.1, 2.2, 5.1 and 5.2 hereof are satisfied or waived, as the case may be, or as the parties may agree.

**“Code”** has the meaning set forth in Section 3.1(l)(ii).

**“Commission”** has the meaning set forth in the Recitals.

**“Company”** has the meaning set forth in the Preamble.

**“Company Counsel”** means Baker & Hostetler LLP.

**“Company Deliverables”** has the meaning set forth in Section 2.3(a).

**“Company’s Knowledge”** means with respect to any statement made to the Company’s Knowledge, that the statement is based upon the actual knowledge of the executive officers or directors of the Company having responsibility for the matter or matters that are the subject of the statement. With respect to any matters relating to Intellectual Property, such awareness or reasonable expectation to have knowledge does not require any such individual to conduct or have conducted or obtain or have obtained any freedom to operate opinions of counsel or any Intellectual Property rights clearance searches.

**“Confidential Data”** has the meaning set forth in Section 3.1(oo).

**“Contract”** means, with respect to any Person, any written agreement, contract, subcontract, lease (whether for real or personal property), mortgage, license, or other legally binding commitment or undertaking of any nature to which such Person is a party or by which such Person or any of its assets are bound or affected under applicable Law.

**“Control”** (including the terms “controlling”, “controlled by” or “under common control with”) means the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a Person, whether through the ownership of voting securities, by contract or otherwise.

**“Disclosure Time”** means, (i) if this Agreement is signed on a day that is not a Business Day or after 9:00 a.m. (New York City time) and before midnight (New York City time) on any Business Day, 9:01 a.m. (New York City time) on the Business Day immediately following the date hereof and (ii) if this Agreement is signed between midnight (New York City time) and 9:00 a.m. (New York City time) on any Business Day, no later than 9:01 a.m. (New York City time) on the date.

**“Effect”** means any effect, change, event, circumstance, state of fact, occurrence or development.

**“Effective Date”** means the date on which the initial Registration Statement required by Section 2(a) of the Registration Rights Agreement is first declared effective by the Commission.

**“Encumbrance”** means any lien, pledge, hypothecation, charge, mortgage, security interest, lease, exclusive license, option, easement, reservation, servitude, adverse title, claim, infringement, interference, option, right of first refusal, preemptive right, community property interest or restriction or encumbrance of any nature (including any restriction on the voting of any security, any restriction on the transfer of any security or other asset, any restriction on the receipt of any income derived from any asset, any restriction on the use of any asset and any restriction on the possession, exercise or transfer of any other attribute of ownership of any asset).

**“Engagement Letter”** has the meaning set forth in Section 6.19(a).

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**“Environmental Laws”** has the meaning set forth in Section 3.1(cc).

**“ERISA”** has the meaning set forth in Section 3.1(I)(ii).

**“Evaluation Date”** has the meaning set forth in Section 3.1(s).

**“Exchange Act”** means the Securities Exchange Act of 1934, as amended, or any successor statute, and the rules and regulations promulgated thereunder.

**“Governmental Authority”** means any: (a) nation, state, commonwealth, province, territory, county, municipality, district or other jurisdiction of any nature, (b) federal, state, local, municipal, foreign, supra-national or other government, (c) governmental or quasi-governmental authority of any nature (including any governmental division, department, agency, commission, bureau, instrumentality, official, ministry, fund, foundation, center, organization, unit, body or entity and any court or other tribunal, and any taxing authority) or (d) self-regulatory organization (including Nasdaq).

**“Hazardous Materials”** has the meaning set forth in Section 3.1(cc).

**“HIPAA”** has the meaning set forth in Section 3.1(oo).

**“Intellectual Property”** has the meaning set forth in Section 3.1(o).

**“IT Systems”** has the meaning set forth in Section 3.1(oo).

**“Law”** means any federal, state, national, supra-national, foreign, local or municipal or other law, statute, constitution, principle of common law, resolution, ordinance, code, edict, decree, rule, regulation, ruling or requirement issued, enacted, adopted, promulgated, implemented or otherwise put into effect by or under the authority of any Governmental Authority (including under the authority of Nasdaq or the Financial Industry Regulatory Authority).

**“Material Adverse Effect”** means any Effect, individually or together with any other Effect, that has had, has, or would reasonably be expected to have a material adverse effect on the business, financial condition, assets, liabilities or results of operations of the Company or its subsidiaries, taken as a whole; provided, however, that Effects arising or resulting from the following shall not be taken into account in determining whether there has been a Material Adverse Effect: (a) the announcement or disclosure of the sale of the Securities or other transactions contemplated by this Agreement, (b) the taking of any action, or the failure to take any action, by the Company that is required to comply with the terms of this Agreement, (c) any natural disaster or epidemics, pandemics or other force majeure events, or any act or threat of terrorism or war, any armed hostilities or terrorist activities (including any escalation or general worsening of any of the foregoing) anywhere in the world or any governmental or other response or reaction to any of the foregoing, (d) any change in GAAP or applicable Law or the interpretation thereof, (e) general economic or political conditions or conditions generally affecting the industries in which the Company and its subsidiaries operate or (f) any change in the cash position of the Company and its subsidiaries which results from operations in the ordinary course of business; except in each case with respect to clauses (c), (d) and (e), to the extent disproportionately affecting the Company and its subsidiaries, taken as a whole, relative to other similarly situated companies in the industries in which the Company and its subsidiaries operate.

**“Material Contract”** means any Contract to which the Company or any Subsidiary is a party or by which either is bound that is material to the business of the Company, including those that have been filed as an exhibit to the SEC Reports pursuant to Item 601(b)(10) of Regulation S-K.

**“Nasdaq”** means The Nasdaq Stock Market.

**“New York Courts”** means the state and federal courts sitting in the City of New York, Borough of Manhattan.

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**“Outside Date”** means the fifth (5th) Business Day following the date of this Agreement.

**“Per Pre-Funded Warrant Purchase Price”** means \$23.789 per Pre-Funded Warrant.

**“Permitted Encumbrances”** means: (a) any Encumbrance for current taxes not yet due and payable or for taxes that are being contested in good faith and, in each case, for which adequate reserves have been made on the Unaudited Interim Balance Sheet in accordance with GAAP; (b) minor liens that have arisen in the ordinary course of business and that do not (in any case or in the aggregate) materially detract from the value of the assets or properties subject thereto or materially impair the operations of the Company or any of its Subsidiaries; (c) statutory liens to secure obligations to landlords, lessors or renters under leases or rental agreements; (d) deposits or pledges made in connection with, or to secure payment of, workers’ compensation, unemployment insurance or similar programs mandated by Law; (e) non-exclusive licenses of Intellectual Property rights granted by the Company or any of its Subsidiaries in the ordinary course of business and that do not (in any case or in the aggregate) materially detract from the value of the Intellectual Property rights subject thereto; and (f) statutory liens in favor of carriers, warehousemen, mechanics and materialmen, to secure claims for labor, materials or supplies.

**“Person”** means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

**“Personal Data”** has the meaning set forth in Section 3.1(oo).

**“Plan”** has the meaning set forth in Section 3.1(l)(ii).

**“Pre-Funded Warrant”** has the meaning set forth in the Recitals.

**“Press Release”** has the meaning set forth in Section 4.4.

**“Principal Trading Market”** means the Trading Market on which the Common Stock is primarily listed on and quoted for trading, which, as of the date of this Agreement and the Closing Date, shall be the Nasdaq Capital Market.

**“Privacy Laws”** has the meaning set forth in Section 3.1(pp).

**“Privacy Statements”** has the meaning set forth in Section 3.1(pp).

**“Proceeding”** means an action, claim, suit, investigation or proceeding (including, without limitation, an investigation or partial proceeding, such as a deposition), whether commenced or threatened.

**“Process”** or **“Processing”** has the meaning set forth in Section 3.1(pp).

**“Purchaser”** or **“Purchasers”** has the meaning set forth in the Recitals.

**“Purchaser Deliverables”** has the meaning set forth in Section 2.3(b).

**“Registrable Securities”** has the meaning set forth in the Registration Rights Agreement.

**“Registration Rights Agreement”** has the meaning set forth in the Recitals.

**“Registration Statement”** means a registration statement meeting the requirements set forth in the Registration Rights Agreement and covering the resale by the Purchasers of the Registrable Securities.

**“Regulation D”** has the meaning set forth in the Recitals.

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“**Rule 144**” means Rule 144 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same effect as such Rule.

“**SEC Reports**” has the meaning set forth in Section 3.1(g).

“**Secretary’s Certificate**” has the meaning set forth in 2.3(a)(vii).

“**Securities**” has the meaning set forth in the Recitals.

“**Securities Act**” has the meaning set forth in the Recitals.

“**Short Sales**” include, without limitation, (i) all “short sales” as defined in Rule 200 promulgated under Regulation SHO under the Exchange Act, whether or not against the box, and all types of direct and indirect stock pledges, forward sale contracts, options, puts, calls, short sales, swaps, “put equivalent positions” (as defined in Rule 16a-1(h) under the Exchange Act) and similar arrangements (including on a total return basis), and (ii) sales and other transactions through non-U.S. broker dealers or non-U.S. regulated brokers (but shall not be deemed to include the location and/or reservation of borrowable shares of Common Stock).

“**Subscription Amount**” means, with respect to each Purchaser, the aggregate amount to be paid for the Securities purchased hereunder by such Purchaser set forth in the “Aggregate Purchase Price” column opposite such Purchaser’s name in the table set forth on Annex A, in United States dollars and in immediately available funds.

“**Subsidiary**” means any subsidiary of the Company, and shall, where applicable, include any subsidiary of the Company formed or acquired after the date hereof.

“**Trading Day**” means a day on which the principal Trading Market is open for business.

“**Trading Market**” means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, or the New York Stock Exchange (or any successors to any of the foregoing).

“**Transaction Documents**” means this Agreement, the schedules and exhibits attached hereto, the Registration Rights Agreement, the Pre-Funded Warrants and any other documents or agreements explicitly contemplated hereunder.

“**Transfer Agent**” means VStock Transfer, LLC, the current transfer agent of the Company, or any successor transfer agent for the Company.

“**Unaudited Interim Balance Sheet**” means the unaudited condensed consolidated balance sheets of the Company and its Subsidiaries as of September 30, 2024 included in the Company’s Quarterly Report on Form 10-Q filed with the Commission on November 8, 2024.

“**Warrant Shares**” means the shares of Common Stock issuable upon exercise of or otherwise pursuant to the Pre-Funded Warrants.

## **ARTICLE II PURCHASE AND SALE**

**Section 2.1 Purchase and Sale.** On the Closing Date, upon the terms and subject to the conditions set forth herein, the Company will issue and sell to the Purchasers, and each Purchaser will purchase, severally and not jointly, that number of Securities set forth opposite the name of such Purchaser under the heading “Number of Pre-Funded Warrants Purchased,” as applicable, on Annex A, for the aggregate purchase price set forth opposite the name of such Purchaser under the heading “Aggregate Purchase Price” on Annex A.

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## Section 2.2 Closing.

(a) **Closing.** Upon the satisfaction of the conditions set forth in Article V, the closing of the purchase and sale of the Securities (the "**Closing**") shall take place remotely via exchange of executed documents and funds on the Closing Date.

(b) **Payment.** On or prior to the Closing Date, each Purchaser shall deliver to the Company the Subscription Amount via wire transfer of immediately available funds to an account designated in writing by the Company, which wire instruction information shall be provided to each Purchaser at least one (1) Business Day prior to the Closing Date, or by other means approved by the Company on or prior to the Closing Date. At the Closing, the Company shall deliver to such Purchaser, Pre-Funded Warrants, in physical form, evidencing the number of Warrant Shares set forth opposite such Purchaser's name on Annex A, in each case free and clear of any liens or restrictions (other than those arising under state and federal securities Laws and bearing the legend set forth in Section 4.1(b)). If the Closing has not occurred for any reason two Business Days after the Closing Date, the Company shall promptly (but not later than one Business Day thereafter) return the Subscription Amount to the Purchaser by wire transfer of United States dollars in immediately available funds to the account specified by the Purchaser, and any book entries for the Securities shall be deemed cancelled; provided that, unless this Agreement has been terminated pursuant to Section 6.18 hereof, such return of funds shall not terminate this Agreement or relieve the Purchaser of its obligation to purchase the Securities at the Closing.

## Section 2.3 Closing Deliverables.

(a) On or prior to the Closing, the Company shall issue, deliver or cause to be delivered to each Purchaser the following (the "**Company Deliverables**"):

- (i) electronic copies of the Pre-Funded Warrants, executed by the Company and registered in the name of each Purchaser;
- (ii) a legal opinion of Company Counsel, dated as of the Closing Date and in form and substance reasonably satisfactory to the Purchasers, executed by such counsel and addressed to the Purchasers;
- (iii) the Registration Rights Agreement, duly executed by the Company;
- (iv) [Reserved]
- (v) the Company shall have filed with Nasdaq a Notification Form: Listing of Additional Shares for the listing of the Warrant Shares;
- (vi) a certificate of the Secretary of the Company (the "**Secretary's Certificate**"), dated as of the Closing Date, (a) certifying the resolutions adopted by the Board of Directors of the Company or a duly authorized committee thereof approving the transactions contemplated by this Agreement and the other Transaction Documents and the issuance of the Securities and the Warrant Shares, (b) certifying the current versions of the certificate of incorporation, as amended, and bylaws of the Company and (c) certifying as to the signatures and authority of persons signing the Transaction Documents and related documents on behalf of the Company, in substantially the form attached hereto as **Exhibit C**;
- (vii) the Compliance Certificate referred to in Section 5.1(h); and
- (viii) a certificate evidencing the formation and good standing of the Company issued by the Secretary of State of the State of Delaware, as of a date within three (3) Business Days of the Closing Date.

(b) On or prior to the Closing, each Purchaser shall deliver or cause to be delivered to the Company the following (the "**Purchaser Deliverables**"):

- (i) this Agreement, duly executed by such Purchaser;
  - (ii) its Subscription Amount, in United States dollars and in immediately available funds; and
  - (iii) the Registration Rights Agreement, duly executed by such Purchaser.
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**ARTICLE III**  
**REPRESENTATIONS AND WARRANTIES**

**Section 3.1 Representations and Warranties of the Company.** Except as previously disclosed in the SEC Reports, the Company hereby represents and warrants the following as of the date hereof and the Closing Date (except for the representations and warranties that speak as of a specific date, which shall be made as of such date) to the Purchasers:

(a) **Due Organization; Subsidiaries.** Each of the Company and its subsidiaries is a corporation or limited liability company duly incorporated or formed, validly existing and in good standing under the Laws of the jurisdiction of its incorporation or organization and has all necessary corporate power and authority: (i) to conduct its business in the manner in which its business is currently being conducted and as proposed to be conducted, (ii) to own or lease and use its property and assets in the manner in which its property and assets are currently owned or leased and used and (iii) to perform its obligations under all Contracts by which it is bound. All of the Subsidiaries are wholly owned by the Company. Each of the Company and the Subsidiaries is licensed and qualified to do business, and is in good standing (to the extent applicable in such jurisdiction), under the Laws of all jurisdictions where the nature of its business in the manner in which its business is currently being conducted requires such licensing or qualification other than in jurisdictions where the failure to be so qualified individually or in the aggregate would not be reasonably expected to have a Material Adverse Effect.

(b) **Authorization; Enforcement; Validity.** The Company has the requisite corporate power and authority to enter into the Transaction Documents and to consummate the transactions contemplated hereby and thereby. All corporate action on the part of the Company, its directors and stockholders necessary for the authorization, execution, sale, issuance and delivery of the Securities and the Warrant Shares contemplated herein has been taken. Each of the Transaction Documents to which the Company is a party have been (or upon delivery will have been) duly executed and delivered by the Company and are, or when delivered in accordance with the terms hereof or thereof, will constitute the legal, valid and binding obligations of the Company enforceable against the Company in accordance with their respective terms, except (i) as such enforceability may be limited by applicable bankruptcy, examinership, insolvency, reorganization, moratorium, liquidation or similar Laws relating to, or affecting generally the enforcement of, creditors' rights and remedies or by other equitable principles of general application, (ii) as limited by Laws relating to the availability of specific performance, injunctive relief or other equitable remedies and (iii) insofar as indemnification and contribution provisions may be limited by applicable Law.

(c) **No Conflicts.** The execution, delivery and performance by the Company of the Transaction Documents to which it is a party and the issuance, sale and delivery of the Securities to be sold by the Company under the Transaction Documents (including the issuance of Warrant Shares upon the exercise of the Pre-Funded Warrants), the performance by the Company of its obligations under the Transaction Documents and the consummation of the transactions contemplated hereby or thereby (including without limitation, the issuance of the securities and the reservation for issuance of the Warrant Shares) do not and will not conflict with, result in the breach or violation of, or constitute (with or without the giving of notice or the passage of time or both) a violation of, or default under, (i) any bond, debenture, note or other evidence of indebtedness, or under any lease, license, franchise, permit, indenture, mortgage, deed of trust, loan agreement, joint venture, Contract or other agreement or instrument to which the Company or any of its Subsidiaries is a party or by which it or its properties may be bound or affected, (ii) the Company's second restated certificate of incorporation, as amended and as in effect on the date hereof (the "*Certificate of Incorporation*"), the Company's amended and restated bylaws, as amended and as in effect on the date hereof (the "*Bylaws*"), or the equivalent document with respect to any of the Company's Subsidiaries, as amended and as in effect on the date hereof, or (iii) any statute or Law, judgment, decree, rule, regulation, ordinance or order of any court or governmental or regulatory body (including the Nasdaq), governmental agency, arbitration panel or authority applicable to the Company, any of its subsidiaries or their respective properties, except in the case of clauses (i) and (iii) for such conflicts, breaches, violations or defaults that would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect.

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(d) **Filings, Consents and Approvals.** Except for any Current Report on Form 8-K, Notice of Exempt Offering of Securities on Form D to be filed by the Company in connection with the transaction contemplated hereby, any required filing with the Nasdaq (other than the Listing of Additional Shares notification form for the listing of the Warrant Shares) and the filing of the registration statement required to be filed by the Registration Rights Agreement, neither the Company nor any of its Subsidiaries is required to give any notice to, or make any filings with, or obtain any authorization, consent, or approval of any government or governmental agency in order to consummate the transactions contemplated by the Transaction Documents. Assuming the accuracy of the representations of the Purchasers in Section 3.2, no consent, approval, authorization or other order of, or registration, qualification or filing with, any court, regulatory body, administrative agency, self-regulatory organization, stock exchange or market (including Nasdaq), or other governmental body is required for the execution and delivery of the Transaction Documents, the valid issuance, sale and delivery of the securities to be sold pursuant to the Transaction Documents (including the issuance of Warrant Shares upon exercise of the Pre-Funded Warrants) other than such as have been or will be made or obtained, or for any securities filings required to be made under federal or state securities Laws applicable to the offering of the Securities or the issuance of Warrant Shares upon exercise of the Pre-Funded Warrants (other than filings that have been made, or will be made, pursuant to the rules and regulations of Nasdaq). The Company and its Subsidiaries are unaware of any facts or circumstances that might prevent the Company from obtaining or effecting any of the registration, application or filings pursuant to this Section 3.1(d).

(e) **Issuance of the Securities and Warrant Shares.** The issuance of the Securities has been duly authorized and the Securities, when issued and paid for in accordance with the terms of the Transaction Documents, will be duly and validly issued, fully paid and nonassessable and free and clear of any Encumbrances, preemptive rights or restrictions (other than those arising under state and federal securities Laws and bearing the legend set forth in Section 4.1(b)). The issuance of the Warrant Shares has been duly authorized and the Warrant Shares, when issued in accordance with the terms of the Pre-Funded Warrants, will be duly authorized, validly issued, fully paid and non-assessable, and shall be free and clear of any Encumbrances, preemptive rights or restrictions (other than as provided in this Agreement or any restrictions on transfer generally imposed under applicable securities Laws). The Company has reserved such number of shares of Common Stock sufficient to enable the full exercise of all of the Pre-Funded Warrants.

(f) **Capitalization.** The outstanding shares of capital stock of the Company have been duly authorized and validly issued and are fully paid and non-assessable. None of the outstanding shares of capital stock of the Company were issued in violation of the preemptive or other similar rights of any securityholder of the Company. The Company has not issued any capital stock since its most recently filed periodic report under the Exchange Act, other than pursuant to incentive awards issued under the Company's incentive award plans, the issuance of shares of Common Stock to employees pursuant to the Company's employee stock purchase plan, the issuance of shares pursuant to inducement awards issued outside of the Company's incentive award plans, or the exercise of Pre-Funded Warrants into shares of Common Stock. There are no outstanding options, warrants, scrip rights to subscribe to, calls or commitments of any character whatsoever relating to, or securities, rights or obligations convertible into or exercisable or exchangeable for, or giving any Person any right to subscribe for or acquire, any shares of Common Stock or the capital stock of any Subsidiary, or contracts, commitments, understandings or arrangements by which the Company or any Subsidiary is or may become bound to issue additional shares of Common Stock or capital stock of any Subsidiary.

(g) **SEC Reports; Disclosure Materials.** The Company has filed or furnished, as applicable, on a timely basis all forms, statements, certifications, reports and documents required to be filed or furnished by it with the Commission under the Exchange Act or the Securities Act since January 1, 2023 (the "**SEC Reports**"). As of the time it was filed with the Commission (or, if amended or superseded by a filing prior to the date of this Agreement, then on the date of such filing), each of the SEC Reports complied in all material respects with the applicable requirements of the Securities Act or the Exchange Act (as the case may be) and as of the time they were filed, none of the SEC Reports contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

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(h) **Financial Statements.** As of their respective filing dates, the financial statements (including any related notes) contained or incorporated by reference in the SEC Reports (i) complied as to form in all material respects with the Securities Act and the Exchange Act, as applicable, and the published rules and regulations of the Commission applicable thereto, (ii) were prepared in accordance with GAAP (except as may be indicated in the notes to such financial statements or, in the case of unaudited financial statements, as permitted by Form 10-Q of the Commission, and except that the unaudited financial statements may not contain footnotes and are subject to normal and recurring year-end adjustments that are not reasonably expected to be material in amount) applied on a consistent basis unless otherwise noted therein throughout the periods indicated and (iii) fairly present, in all material respects, the consolidated financial position of the Company as of the respective dates thereof and the results of operations and cash flows of the Company for the periods covered thereby. Other than as expressly disclosed in the SEC Reports filed prior to the date hereof, there has been no material change in the Company's accounting methods or principles that would be required to be disclosed in the Company's financial statements in accordance with GAAP. Except as set forth in the consolidated financial statements of the Company included in the SEC Reports filed prior to the date hereof, the Company has not incurred any liabilities, contingent or otherwise, except those incurred in the ordinary course of business, consistent (as to amount and nature) with past practices since the date of such financial statements, none of which, individually or in the aggregate, have had or would reasonably be expected to have a Material Adverse Effect. The books of account and other financial records of the Company and each of its Subsidiaries are true and complete in all material respects.

(i) **Independent Accountants.** BPM LLP, who have certified certain financial statements of the Company and delivered their report with respect to the audited financial statements included in the SEC Reports, has at all times since the date of enactment of the Sarbanes-Oxley Act been (i) a registered public accounting firm (as defined in Section 2(a)(12) of the Sarbanes-Oxley Act), (ii) to the Company's Knowledge, "independent" with respect to the Company within the meaning of Regulation S-X under the Exchange Act and (iii) to the knowledge of the Company, in compliance with subsections (g) through (l) of Section 10A of the Exchange Act and the rules and regulations promulgated by the Commission and the Public Accounting Oversight Board thereunder.

(j) **Absence of Certain Changes.** Since September 30, 2024, there has been (i) no material adverse change to, and no material adverse development in, the business, properties, operations, condition (financial or otherwise), results of operations or prospects of the Company or its Subsidiaries and (ii) no Material Adverse Effect. Since September 30, 2024, neither the Company nor any of its Subsidiaries has (A) declared or paid any dividends, (B) sold any material assets, individually or in the aggregate, outside of the ordinary course of business, (C) made any material change or material amendment to, or waiver of any material right, or termination of, any Material Contract or (D) had material capital expenditures, individually or in the aggregate, outside of the ordinary course of business. Neither the Company nor any of its Subsidiaries has taken any steps to seek protection pursuant to any bankruptcy Law nor does the Company have any knowledge or reason to believe that its creditors intend to initiate involuntary bankruptcy proceedings or any actual knowledge of any fact that would reasonably lead any such creditor to do so. The Company and its Subsidiaries, individually and on a consolidated basis, are not as of the date hereof, and after giving effect to the transactions contemplated hereby to occur at the Closing, will not be Insolvent (as defined below). For purposes of this Section 3.1(j), "**Insolvent**" means, with respect to any Person, (1) the present fair saleable value of such Person's assets is less than the amount required to pay such Person's total indebtedness, (2) such Person is unable to pay its debts and liabilities, subordinated, contingent or otherwise, as such debts and liabilities become absolute and matured, (3) such Person intends to incur or believes that it will incur debts that would be beyond its ability to pay as such debts mature or (4) such Person has unreasonably small capital with which to conduct the business in which it is engaged as such business is now conducted and is proposed to be conducted.

(k) **Litigation.** There is no action, suit, proceeding or investigation pending or, to the Company's Knowledge, currently threatened in writing against the Company or any of its directors and officers that questions the validity of the Transaction Documents or the right of the Company to enter into the Transaction Documents or to consummate the transactions contemplated hereby and thereby. There is no action, suit, proceeding or investigation pending or, to the Company's Knowledge, currently threatened in writing against the Company or any Subsidiary or any of their respective directors and officers which would, if there were an unfavorable decision, have, either individually or in the aggregate, a Material Adverse Effect. Neither the Company nor any Subsidiary is or has been the subject of any action, suit, proceeding or investigation involving a claim of violation of or liability under federal or state securities laws or a claim of breach of fiduciary duty. There has not been, and to the knowledge of the Company, there is not pending or contemplated, any investigation by the Commission involving the Company or, to the Company's Knowledge, any current or former director or officer of the Company.

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**(l) Employment Matters; ERISA Compliance.**

(i) No material labor dispute exists or, to the Company's Knowledge, is imminent with respect to any of the employees of the Company which would have or would reasonably be expected to result in a Material Adverse Effect. None of the Company's or any Subsidiary's employees is a member of a labor union that relates to such employee's relationship with the Company, and neither the Company nor any of its Subsidiaries is a party to a collective bargaining agreement. To the Company's Knowledge, no executive officer or key employee, is, or is now expected to be, in violation of any material term of any employment Contract, confidentiality, disclosure or proprietary information agreement or non-competition agreement, or any other Contract or agreement or any restrictive covenant in favor of any third party, and to the Company's Knowledge, the continued employment of each such executive officer or key employee does not subject the Company or any Subsidiary to any liability with respect to any of the foregoing matters, except, in each case, matters that, individually or in the aggregate, would not reasonably be expected to result in a Material Adverse Effect. The Company is in compliance with all U.S. federal, state, local and foreign Laws and regulations relating to employment and employment practices, terms and conditions of employment and wages and hours, except where the failure to be in compliance would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect.

(ii) Each employee benefit plan, within the meaning of Section 3(3) of the Employee Retirement Income Security Act of 1974, as amended ("**ERISA**"), for which the Company, any of its Subsidiaries or any member of its "Controlled Group" (defined as any entity, whether or not incorporated, that is under common control with the Company within the meaning of Section 4001(a)(14) of ERISA or any entity that would be regarded as a single employer with the Company under Section 414(b), (c), (m) or (o) of the Internal Revenue Code of 1986, as amended (the "**Code**")) would have any liability (each, a "**Plan**") has been maintained in compliance with its terms and the requirements of any applicable statutes, orders, rules and regulations, including, but not limited to, ERISA and the Code; (ii) no prohibited transaction, within the meaning of Section 406 of ERISA or Section 4975 of the Code, has occurred with respect to any Plan, excluding transactions effected pursuant to a statutory or administrative exemption; (iii) for each Plan that is subject to the funding rules of Section 412 of the Code or Section 302 of ERISA, no Plan has failed (whether or not waived), or is reasonably expected to fail, to satisfy the minimum funding standards (within the meaning of Section 302 of ERISA or Section 412 of the Code) applicable to such Plan; (iv) no Plan is, or is reasonably expected to be, in "at risk status" (within the meaning of Section 303(i) of ERISA), and no Plan that is a "multiemployer plan" within the meaning of Section 4001(a)(3) of ERISA is in "endangered status" or "critical status" (within the meaning of Sections 304 and 305 of ERISA); (v) the fair market value of the assets of each Plan exceeds the present value of all benefits accrued under such Plan (determined based on those assumptions used to fund such Plan); (vi) no "reportable event" (within the meaning of Section 4043(c) of ERISA and the regulations promulgated thereunder) has occurred or is reasonably expected to occur; (vii) each Plan that is intended to be qualified under Section 401(a) of the Code is so qualified, and nothing has occurred, whether by action or by failure to act, which would reasonably be expected to cause the loss of such qualification; (viii) neither the Company nor any member of the Controlled Group has incurred, nor reasonably expects to incur, any liability under Title IV of ERISA (other than contributions to the Plan or premiums to the Pension Benefit Guarantee Corporation, in the ordinary course and without default) in respect of a Plan (including a "multiemployer plan" within the meaning of Section 4001(a)(3) of ERISA); and (ix) none of the following events has occurred or is reasonably likely to occur: (A) a material increase in the aggregate amount of contributions required to be made to all Plans by the Company or its Controlled Group affiliates in the current fiscal year of the Company and its Controlled Group affiliates compared to the amount of such contributions made in the Company's and its Controlled Group affiliates' most recently completed fiscal year; or (B) a material increase in the Company's and its Subsidiaries' "accumulated post-retirement benefit obligations" (within the meaning of Accounting Standards Codification Topic 715-60) compared to the amount of such obligations in the Company's and its Subsidiaries' most recently completed fiscal year, except in each case with respect to the events or conditions set forth in (i) through (ix) hereof, as would not, individually or in the aggregate, result in a Material Adverse Effect.

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(m) **Conduct of Business; Regulatory Permits.** Neither the Company nor any of its Subsidiaries is in violation of any term of or in default under its respective Certificate of Incorporation, any certificate of designation of any outstanding series of preferred stock of the Company or the Bylaws or their organizational charter or bylaws, respectively. Neither the Company nor any of its Subsidiaries (i) is in default of or in violation of, nor has the Company or any of its Subsidiaries received written notice of a claim that it is in default under or that it is in violation of, any Material Contract (whether or not such default or violation has been waived), or (ii) is in violation of any judgment, decree or order or any statute, ordinance, rule or regulation applicable to the Company or its Subsidiaries, and neither the Company nor any of its Subsidiaries will conduct its business in violation of any of the foregoing, except for possible violations which would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. Without limiting the generality of the foregoing, except as disclosed in the SEC Reports, the Company is not in violation of any of the rules, regulations or requirements of the Nasdaq and has no knowledge of any facts or circumstances that would reasonably lead to delisting or suspension of the Common Stock by Nasdaq in the foreseeable future. The Company and its Subsidiaries possess all certificates, authorizations and permits issued by the appropriate regulatory authorities necessary to conduct their respective businesses as currently conducted, except where the failure to possess such certificates, authorizations or permits would not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect, and neither the Company nor any such Subsidiary has received any written notice of proceedings relating to the revocation or modification of any such certificate, authorization or permit.

(n) **Title to Assets.** Each of the Company and its Subsidiaries owns, and has good and marketable title to, or, in the case of leased properties and assets, valid leasehold interests in, all tangible properties or tangible assets and equipment used or held for use in its business or operations or purported to be owned by it, including: (i) all tangible assets reflected on the Unaudited Interim Balance Sheet and (ii) all other tangible assets reflected in the books and records of the Company as being owned by the Company. All of such assets are owned or, in the case of leased assets, leased by the Company or any of its Subsidiaries free and clear of any Encumbrances, other than Permitted Encumbrances.

(o) **Intellectual Property Rights.** Except as otherwise disclosed in the SEC Reports, the Company and its Subsidiaries own, or have obtained valid and enforceable licenses for, the inventions, patent applications, patents, trademarks, trade names, service names, copyrights, trade secrets and other intellectual property described in the SEC Reports as being owned or licensed by them or which are necessary for the conduct of their respective businesses as currently conducted or as currently proposed to be conducted (collectively, "**Intellectual Property**") and, to the Company's Knowledge, the conduct of their respective businesses does not and will not infringe, misappropriate or otherwise conflict in any material respect with any such rights of others. To the Company's Knowledge, the operation of the business of the Company, as now conducted or as proposed to be conducted in the SEC Reports, together with the Company's use of the Company's Intellectual Property, does not conflict with, infringe, misappropriate or otherwise violate the Intellectual Property of any third party. Except as disclosed in the SEC Reports, no actions, suits, claims or proceedings have been asserted, or, to the Company's Knowledge, threatened against the Company alleging any of the foregoing or seeking to challenge, deny or restrict the operation of the business of the Company and the Company is unaware of any facts which would form a reasonable basis for any such claim. Except as disclosed in the SEC Reports, the Company has not received any notice of a claim of infringement, misappropriation or conflict with Intellectual Property rights of others, except for such claims that would not, individually or the in aggregate, be reasonably expected to have a Material Adverse Effect. Except as disclosed in the SEC Reports, the Intellectual Property rights owned by the Company and, to the Company's Knowledge, any Intellectual Property rights licensed to the Company have not been adjudged invalid or unenforceable, in whole or in part, and there is no pending or, to the Company's Knowledge, threatened action, suit, proceeding or claim by others challenging the validity or scope of any such Intellectual Property rights, and the Company is unaware of any facts which would form a reasonable basis for any such challenge, except for such actions, suits, proceedings, or claims that would not, individually or the in aggregate, be reasonably expected to have a Material Adverse Effect. Except as otherwise disclosed in the SEC Reports, the Company is not a party to or bound by any options, licenses or agreements with respect to the Intellectual Property rights of any other person or entity that are required to be set forth in the SEC Reports. None of the technology or intellectual property used by the Company in its business has been obtained or is being used by the Company in violation of any contractual obligation binding on the Company or, to the Company's Knowledge, any of its officers, directors or employees or otherwise in violation of the rights of any persons.

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(p) **Insurance.** Each of the Company and its Subsidiaries are insured by recognized, financially sound and reputable institutions with policies in such amounts and with such deductibles and covering such risks as are generally deemed adequate and customary for their businesses including, but not limited to, policies covering real and personal property owned or leased by the Company and its Subsidiaries against theft, damage, destruction, acts of vandalism and earthquakes and policies covering the Company and its Subsidiaries for product liability claims and clinical trial liability claims. The Company has no reason to believe that it or any of its subsidiaries will not be able to (i) renew its existing insurance coverage as and when such policies expire or (ii) obtain comparable coverage from similar institutions as may be necessary or appropriate to conduct its business as now conducted and at a cost that could not be expected to result in a Material Adverse Effect. Neither the Company nor any of its subsidiaries has been denied any insurance coverage which it has sought or for which it has applied.

(q) **Transactions with Affiliates and Employees.** Since the date of the Company's last proxy statement filed in 2024 with the SEC, no event has occurred that would be required to be reported by the Company pursuant to Item 404 of Regulation S-K promulgated by the SEC.

(r) **Company's Accounting System.** The Company and each of its Subsidiaries makes and keeps accurate books and records and maintains a system of internal control over financial reporting (as defined in Rules 13a-15 and 15d-15 under the Exchange Act) sufficient to provide reasonable assurance that: (i) transactions are executed in accordance with management's general or specific authorization; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles as applied in the United States and to maintain accountability for assets; (iii) access to assets is permitted only in accordance with management's general or specific authorization; (iv) the recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences; and (v) the interactive data in eXtensible Business Reporting Language included or incorporated by reference in the SEC Reports fairly presents the information called for in all material respects and is prepared in accordance with the Commission's rules and guidelines applicable thereto. Since January 1, 2023, neither the Company nor any Subsidiary nor, to the Company's Knowledge, any director, officer, employee, auditor, accountant or representative of the Company or any Subsidiary has received or otherwise had or obtained knowledge of any material complaint, allegation, assertion or claim, whether written or oral, regarding the accounting or auditing practices, procedures, methodologies or methods of the Company or any Subsidiary or their respective internal accounting controls, including any material complaint, allegation, assertion or claim that the Company or any Subsidiary has engaged in questionable accounting or auditing practices. Since the end of the Company's most recent audited fiscal year, there has been (A) no significant deficiencies or material weakness in the Company's internal control over financial reporting (whether or not remediated) and (B) no change in the Company's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

(s) **Sarbanes-Oxley; Disclosure Controls.** The Company is in compliance in all material respects with the applicable provisions of the Sarbanes-Oxley Act of 2002 and the rules and regulations promulgated thereunder. The Company maintains disclosure controls and procedures (as such term is defined in Rule 13a-15(e) under the Exchange Act) that comply with the requirements of the Exchange Act. Such disclosure controls and procedures have been designed to ensure that material information relating to the Company and its Subsidiaries is made known to the Company's principal executive officer and principal financial officer by others within those entities, and such disclosure controls and procedures are effective in all material respects. The Company's certifying officers have evaluated the effectiveness of the disclosure controls and procedures of the Company and the Subsidiaries as of the end of the period covered by the most recently filed periodic report under the Exchange Act (such date, the "**Evaluation Date**") and nothing has occurred since the Evaluation Date that has materially impacted the effectiveness of such disclosure controls and procedures.

(t) [Reserved].

(u) **Certain Fees.** No person or entity will have, as a result of the transactions contemplated by this Agreement, any valid right, interest or claim against or upon the Company or a Purchaser for any commission, fee or other compensation pursuant to any agreement, arrangement or understanding entered into by or on behalf of the Company. The Purchasers shall have no obligation with respect to any fees or with respect to any claims made by or on behalf of other Persons for fees of a type contemplated in this Section 3.1(u) that may be due in connection with the transactions contemplated by the Transaction Documents. The Company shall indemnify, pay, and hold each Purchaser harmless against, any liability, loss or expense (including, without limitation, attorneys' fees and out-of-pocket expenses) arising in connection with any such right, interest or claim.

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(v) **Private Placement.** Assuming the accuracy of the Purchasers' representations and warranties set forth in Section 3.2 of this Agreement no registration under the Securities Act is required for the offer and sale of the Securities by the Company to the Purchasers under the Transaction Documents. The issuance and sale of the Securities hereunder does not contravene the rules and regulations of the Principal Trading Market.

(w) **Company Not an "Investment Company."** The Company is not, and will not be, immediately after receipt of payment for the Securities, required to register as an "investment company" under the Investment Company Act of 1940, as amended.

(x) **Registration Rights.** Other than each of the Purchasers pursuant to the Registration Rights Agreement or as set forth in the SEC Reports, no Person has any right to cause the Company to effect the registration under the Securities Act of the offer or sale of any securities of the Company other than those offers and sales that are currently registered on an effective registration statement on file with the Commission.

(y) **Listing and Maintenance Requirements.** The Common Stock is registered pursuant to Section 12(b) or 12(g) of the Exchange Act, and the Company has taken no action designed to terminate the registration of the Common Stock under the Exchange Act, nor has the Company received any notification that the Commission or the Principal Trading Market is contemplating terminating such registration or listing. The Company is, and has no reason to believe that it will not in the foreseeable future continue to be, in compliance with all applicable listing and maintenance requirements of the Principal Trading Market.

(z) **Disclosure.** The Company confirms that it has not provided, and to the Company's Knowledge, none of its officers or directors nor any other Person acting on its or their behalf has provided, and it has not authorized any other Person to provide to provide any Purchaser or its respective agents or counsel with any information that it believes constitutes material, non-public information except insofar as the existence, provisions and terms of the Transaction Documents and the proposed transactions hereunder may constitute such information, all of which will be disclosed by the Company in the Press Release as contemplated by Section 4.4 hereof. All of the disclosure furnished by or on behalf of the Company to the Purchasers regarding the Company and its Subsidiaries, their respective businesses and the transactions contemplated hereby is true and correct in all material respects and does not contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements made therein, in the light of the circumstances under which they were made, not misleading. The Company understands and confirms that the Purchasers will rely on the foregoing representations in effecting transactions in securities of the Company.

(aa) **No Integrated Offering.** Assuming the accuracy of the Purchasers' representations and warranties set forth in Section 3.2, none of the Company, its Subsidiaries nor, to the Company's Knowledge, any of its Affiliates or any Person acting on its behalf has, directly or indirectly, at any time within the past six (6) months, made any offers or sales of any Company security or solicited any offers to buy any security under circumstances that would (i) eliminate the availability of the exemption from registration under Regulation D under the Securities Act in connection with the offer and sale by the Company of the Securities as contemplated hereby or (ii) cause the offering of the Securities pursuant to the Transaction Documents to be integrated with prior offerings by the Company for purposes of any applicable Law, regulation or stockholder approval provisions, including, without limitation, under the rules and regulations of any Trading Market on which any of the securities of the Company are listed or designated.

(bb) **Tax Matters.** Each of the Company and each of its Subsidiaries has timely filed all income tax returns and all other material tax returns that were required to be filed by or with respect to it under applicable Law. All such tax returns were correct and complete in all material respects and have been prepared in material compliance with all applicable Law. Subject to exceptions as would not be material, no claim has ever been made by a Governmental Authority in a jurisdiction where the Company or any of its Subsidiaries does not file tax returns that the Company or any of its Subsidiaries is subject to taxation by that jurisdiction. All material amounts of taxes due and owing by the Company and each of its Subsidiaries (whether or not shown on any tax return) have been timely paid. The unpaid taxes of the Company and each of its Subsidiaries for periods (or portions thereof) ending on or prior to the date of the Unaudited Interim Balance Sheet do not materially exceed the accruals for current taxes set forth on the Unaudited Interim Balance Sheet. Since the date of the Unaudited Interim Balance Sheet, neither the Company nor any of its Subsidiaries has incurred any material liability for taxes outside the ordinary course of business or otherwise inconsistent with past custom and practice.

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(cc) **Compliance with Environmental Laws.** Since January 1, 2023, the Company and each of its Subsidiaries has complied with all federal, state, local and foreign laws relating to pollution or protection of human health or the environment (including ambient air, surface water, groundwater, land surface or subsurface strata), including laws relating to emissions, discharges, releases or threatened releases of chemicals, pollutants, contaminants, or toxic or hazardous substances or wastes (collectively, "**Hazardous Materials**") into the environment, or otherwise relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials, as well as all authorizations, codes, decrees, demands, or demand letters, injunctions, judgments, licenses, notices or notice letters, orders, permits, plans or regulations, issued, entered, promulgated or approved thereunder ("**Environmental Laws**"), which compliance includes the possession by the Company of all permits and other governmental authorizations required under applicable Environmental Laws and compliance with the terms and conditions thereof, except for any failure to be in compliance that, individually or in the aggregate, would not result in a Material Adverse Effect. Neither the Company nor any of its Subsidiaries has received since January 1, 2020, any written notice or other communication (in writing or otherwise), whether from a Governmental Authority, citizens group, employee or otherwise, that alleges that the Company or any of its Subsidiaries is not in compliance with any Environmental Law, and, to the knowledge of the Company, there are no circumstances that may prevent or interfere with the Company's or any of its Subsidiaries' compliance with any Environmental Law in the future, except where such failure to comply would not reasonably be expected to have a Material Adverse Effect. To the Company's Knowledge: (i) no current or prior owner of any property leased or controlled by the Company or any of its Subsidiaries has received since January 1, 2020, any written notice or other communication relating to property owned or leased at any time by the Company or any of its Subsidiaries, whether from a Governmental Authority, citizens group, employee or otherwise, that alleges that such current or prior owner or the Company or any of its Subsidiaries is not in compliance with or violated any Environmental Law relating to such property and (ii) neither the Company nor any of its Subsidiaries has any material liability under any Environmental Law.

(dd) **No General Solicitation.** Neither the Company nor, to the Company's Knowledge, any person acting on behalf of the Company has offered or sold any of the Securities by any form of general solicitation or general advertising.

(ee) **Anti-Corruption and Anti-Bribery Laws.** Neither the Company nor any of its Subsidiaries nor any director, officer, or employee of the Company or any of its Subsidiaries, nor to the Company's Knowledge, any agent, Affiliate or other person acting on behalf of the Company or any of its subsidiaries has, in the course of its actions for, or on behalf of, the Company or any of its subsidiaries (i) used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expenses relating to political activity; (ii) made or taken any act in furtherance of an offer, promise, or authorization of any direct or indirect unlawful payment or benefit to any non-U.S. or domestic government official or employee, including of any government-owned or controlled entity or public international organization, or any political party, party official, or candidate for political office; (iii) violated or is in violation of any provision of the U.S. Foreign Corrupt Practices Act of 1977, as amended (the "**FCPA**"), the UK Bribery Act 2010, or any other applicable anti-bribery or anti-corruption Law; or (iv) made, offered, authorized, requested, or taken an act in furtherance of any unlawful bribe, rebate, payoff, influence payment, kickback or other unlawful payment or benefit. The Company and its Subsidiaries and, to the Company's Knowledge, the Company's Affiliates have conducted their respective businesses in compliance with the FCPA and have instituted and maintain policies and procedures designed to ensure, and which are reasonably expected to continue to ensure, continued compliance therewith.

(ff) **Money Laundering Laws.** The operations of the Company and its subsidiaries are and have been conducted at all times in compliance with applicable financial recordkeeping and reporting requirements of the USA Patriot Act, the Bank Secrecy Act of 1970, as amended, the money laundering statutes of all jurisdictions, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the "**Money Laundering Laws**"); and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator or non-governmental authority involving the Company or its subsidiaries with respect to the Money Laundering Laws is pending or, to the Company's Knowledge, threatened.

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(gg) **OFAC.** Neither the Company nor its subsidiaries nor any of their respective affiliates, directors, officers, nor to the Company's Knowledge, any agent or employee of the Company or its subsidiaries is subject to any sanctions administered or enforced by the Office of Foreign Assets Control ("**OFAC**") of the United States Treasury Department, the U.S. Department of State, the United Nations Security Council, the European Union, His Majesty's Treasury or any other relevant sanctions authority; and the Company will not directly or indirectly use the proceeds of the offering of the securities contemplated hereby, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity for the purpose of financing the activities of any person that is the target of sanctions administered or enforced by such authorities or in connection with any country or territory that is the target of country- or territory-wide OFAC sanctions, including, without limitation, the Crimea Region and the non-government controlled areas of the Zaporizhzhia and Kherson Regions of Ukraine, the so-called Donetsk People's Republic, the so-called Luhansk People's Republic, Cuba, Iran, North Korea and Syria.

(hh) **Off Balance Sheet Arrangements.** There is no transaction, arrangement, or other relationship between the Company (or any Subsidiary) and an unconsolidated or other off balance sheet entity that is required to be disclosed by the Company in SEC Reports and is not so disclosed and would have or reasonably be expected to result in a Material Adverse Effect.

(ii) **Acknowledgment Regarding Purchaser's Purchase of Securities.** The Company acknowledges and agrees that each Purchaser is acting solely in the capacity of an arm's length purchaser with respect to this Agreement and the other Transaction Documents and the transactions contemplated hereby and thereby, and that the obligations of each Purchaser under this Agreement and the other Transaction Documents are several and not joint. The Company further acknowledges that no Purchaser is acting as a financial advisor or fiduciary of the Company or any of its Subsidiaries (or in any similar capacity) with respect to this Agreement and the other Transaction Documents and the transactions contemplated hereby and thereby, and any advice given by a Purchaser or any of its representatives or agents in connection with this Agreement and the other Transaction Documents and the transactions contemplated hereby and thereby is merely incidental to such Purchaser's purchase of the Securities. The Company further represents to each Purchaser that the Company's decision to enter into the Transaction Documents has been based solely on the independent evaluation by the Company and its representatives.

(jj) **No Price Stabilization or Manipulation; Compliance with Regulation M.** Neither the Company nor any of its Subsidiaries has taken, directly or indirectly, any action designed to or that might cause or result in stabilization or manipulation of the price of the security of the Company to facilitate the sale or resale of the Securities or Warrant Shares or otherwise, and has taken no action which would directly or indirectly violate Regulation M under the Exchange Act.

(kk) **Clinical Data and Regulatory Compliance.** The preclinical studies and clinical trials, and other studies (collectively, "studies") that are described in, or the results of which are referred to in, the SEC Reports were and, if still pending, are being conducted in all material respects in accordance with the protocols, procedures and controls designed and approved for such studies and with standard medical and scientific research procedures. Each description of the results of such studies is accurate and complete in all material respects and fairly presents the data derived from such studies, and the Company and its Subsidiaries have no knowledge of any other studies the results of which are inconsistent with, or otherwise call into question, the results described or referred to in the SEC Reports. The Company and its Subsidiaries have made all such filings and obtained all such approvals as may be required by the Food and Drug Administration of the U.S. Department of Health and Human Services or any committee thereof or from any other U.S. or non-U.S. government or drug or medical device regulatory agency, or health care facility Institutional Review Board (collectively, the "**Regulatory Agencies**"). Neither the Company nor any of its Subsidiaries has received any notice of, or correspondence from, any Regulatory Agency requiring the termination, suspension or modification of any clinical trials that are described or referred to in the SEC Reports, and which would have a Material Adverse Effect. The Company and its Subsidiaries have each operated and currently are in compliance in all material respects with all applicable rules, regulations and policies of the Regulatory Agencies.

(ll) **No Additional Agreements.** The Company does not have any agreement or understanding (including side letters) with any Purchaser with respect to the transactions contemplated by the Transaction Documents other than as specified in the Transaction Documents.

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(mm) **No Disqualification Events.** No “bad actor” disqualifying event described in Rule 506(d)(1)(i)-(viii) of the Securities Act (a “**Disqualification Event**”) is applicable to the Company or, to the Company’s Knowledge, any Company Covered Person (as defined below), except for a Disqualification Event as to which Rule 506(d)(2)(ii-iv) or (d)(3), is applicable. “**Company Covered Person**” means, with respect to the Company as an “issuer” for purposes of Rule 506 promulgated under the Securities Act, any person listed in the first paragraph of Rule 506(d)(1). The Company is not aware of any Person (other than any Company Covered Person) that has been or will be paid (directly or indirectly) remuneration for solicitation of purchasers in connection with the sale of the Securities pursuant to this Agreement. The Company has complied, to the extent applicable, with its disclosure obligations under Rule 506(e).

(nn) **Shell Company Status.** The Company is not, and has never been, an issuer identified in Rule 144(i)(1).

(oo) **Cybersecurity.** Except as would not reasonably be expected to have a Material Adverse Effect, the Company and its subsidiaries’ information technology assets and equipment, computers, systems, networks, hardware, software, websites, applications, and databases (collectively, “**IT Systems**”) are adequate for, and operate and perform in all material respects as required in connection with the operation of the business of the Company and its subsidiaries as currently conducted, and, to the Company’s knowledge, are free and clear of all material Trojan horses, time bombs, malware and other malicious code. The Company and its subsidiaries have implemented and maintained commercially reasonable physical, technical and administrative controls designed to maintain and protect the confidentiality, integrity, availability, privacy and security of all sensitive, confidential or regulated data (“**Confidential Data**”) used or maintained in connection with their businesses and Personal Data (defined below), and the integrity, availability continuous operation, redundancy and security of all IT Systems. “**Personal Data**” means the following data used in connection with the Company’s and its subsidiaries’ businesses and in their possession or control: (i) a natural person’s name, street address, telephone number, e-mail address, photograph, social security number or other tax identification number, driver’s license number, passport number, credit card number, bank information, or customer or account number; (ii) information that identifies, relates to, or may reasonably be used to identify an individual; (iii) any information regarding an individual’s medical history, mental or physical condition, or medical treatment or diagnosis by a health care professional; (iv) an individual’s health insurance policy number or subscriber identification number, any unique identifier used by a health insurer to identify the individual, or any information in an individual’s application and claims history; (v) any information which would qualify as “protected health information” under the Health Insurance Portability and Accountability Act of 1996, as amended by the Health Information Technology for Economic and Clinical Health Act (collectively, “**HIPAA**”); (vi) any information which would qualify as “personal data,” “personal information” (or similar term) under the Privacy Laws; and (vii) any other piece of information that alone, or combined with other information, allows the identification of such natural person, or his or her family, or permits the collection or analysis of any data related to an identified person’s health or sexual orientation. To the Company’s Knowledge, there have been no breaches, outages or unauthorized uses of or accesses to the Company’s IT Systems, Confidential Data, and Personal Data. The Company and its subsidiaries are presently, and at all prior times were, in material compliance with all applicable laws or statutes and all judgments and orders binding on the Company, applicable binding rules and regulations of any court or arbitrator or governmental or regulatory authority, and their internal policies and contractual obligations, each relating to the Processing, privacy and security of Personal Data and Confidential Data, the privacy and security of IT Systems and the protection of such IT Systems, Confidential Data, and Personal Data from unauthorized use, access, misappropriation or modification.

(pp) **Compliance with Data Privacy Laws.** The Company and its subsidiaries are, and at all prior times were, in material compliance with all applicable state and federal data privacy and security laws and regulations regarding the collection, use, storage, retention, disclosure, transfer, disposal, or any other processing (collectively “**Process**” or “**Processing**”) of Personal Data, including without limitation HIPAA, the California Consumer Privacy Act, and the European Union General Data Protection Regulation (EU 2016/679) (collectively, the “**Privacy Laws**”). To ensure compliance with the Privacy Laws, the Company and its subsidiaries have in place, comply with, and take all appropriate steps necessary to ensure compliance in all material respects with their policies and procedures relating to data privacy and security, and the Processing of Personal Data and Confidential Data (the “**Privacy Statements**”). The Company and its subsidiaries have, except as would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect, at all times since inception provided accurate notice of its Privacy Statements then in effect to its customers, employees, third party vendors and representatives. None of such disclosures made or contained in any Privacy Statements have been materially inaccurate, misleading, incomplete, or in material violation of any Privacy Laws. The Company further certifies that neither it nor any of its subsidiaries (i) has received notice of any actual or potential claim, complaint, proceeding, regulatory proceeding or liability under or relating to, or actual or potential violation of, any of the Privacy Laws, contracts related to the Processing of Personal Data or Confidential Data, or Privacy Statements, and has no knowledge of any event or condition that would reasonably be expected to result in any such notice, (ii) is currently conducting or paying for, in whole or in part, any investigation, remediation, or other corrective action pursuant to any Privacy Law or contract, or (iii) is a party to any order, decree, or agreement that imposes any obligation or liability under any Privacy Law.

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(qq) **CFIUS.** The Company is not a U.S. business that (i) produces, designs, tests, manufactures, fabricates, or develops one or more “critical technologies”; (ii) performs the functions as set forth in column 2 of Appendix A to 31 C.F.R. Part 800 with respect to “covered investment critical infrastructure”; or (iii) maintains or collects, directly or indirectly, “sensitive personal data” of U.S. citizens, in each case as such terms in quotation marks are defined in the Defense Production Act of 1950, as amended, including all implementing regulations thereof.

**Section 3.2 Representations and Warranties of the Purchasers.** Each Purchaser hereby, for itself and for no other Purchaser, represents and warrants as of the date hereof and as of the Closing Date to the Company as follows:

(a) **Organization; Authority.** Such Purchaser is an entity duly organized, validly existing and in good standing under the Laws of the jurisdiction of its organization with the requisite corporate or, if such Purchaser is not a corporation, partnership, limited liability company or other applicable like power and authority to enter into and to consummate the transactions contemplated by the applicable Transaction Documents and otherwise to carry out its obligations hereunder and thereunder. The execution and delivery of this Agreement by such Purchaser and performance by such Purchaser of the transactions contemplated by this Agreement have been duly authorized by all necessary corporate or, if such Purchaser is not a corporation, such partnership, limited liability company or other applicable like action, on the part of such Purchaser. Each Transaction Document to which it is a party has been duly executed by such Purchaser, and when delivered by such Purchaser in accordance with the terms hereof, will constitute the valid and legally binding obligation of such Purchaser, enforceable against it in accordance with its terms, except as such enforceability may be limited by applicable bankruptcy, examinership, insolvency, reorganization, moratorium, liquidation or similar Laws relating to, or affecting generally the enforcement of, creditors’ rights and remedies or by other equitable principles of general application.

(b) **No Conflicts.** The execution, delivery and performance by such Purchaser of this Agreement and the Registration Rights Agreement and the consummation by such Purchaser of the transactions contemplated hereby and thereby will not (i) result in a violation of the organizational documents of such Purchaser, (ii) conflict with, or constitute a default (or an event which with notice or lapse of time or both would become a default) under, or give to others any rights of termination, amendment, acceleration or cancellation of, any agreement, indenture or instrument to which such Purchaser is a party, or (iii) result in a violation of any Law, rule, regulation, order, judgment or decree (including U.S. federal and state securities Laws) applicable to such Purchaser, except in the case of clauses (ii) and (iii) above, for such conflicts, defaults, rights or violations which would not, individually or in the aggregate, reasonably be expected to have a material adverse effect on the ability of such Purchaser to perform its obligations hereunder.

(c) **Investment Intent.** Such Purchaser understands that the Securities and the Warrant Shares are “restricted securities” and the offer and sale thereof have not been registered under the Securities Act or any applicable U.S. state securities Law and is acquiring the Securities as principal for its own account and not with a view to, or for distributing or reselling such Securities or any part thereof in violation of the Securities Act or any applicable U.S. state or other securities Laws, provided, however, that by making the representations herein, such Purchaser does not agree to hold any of the Securities for any minimum period of time and reserves the right, subject to the provisions of this Agreement and the Registration Rights Agreement, at all times to sell or otherwise dispose of all or any part of such Securities pursuant to an effective registration statement under the Securities Act or under an exemption from such registration and in compliance with applicable U.S. federal, state and other securities Laws. Such Purchaser is acquiring the Securities hereunder in the ordinary course of its business. Such Purchaser does not presently have any agreement, plan or understanding, directly or indirectly, with any Person to distribute or effect any distribution of any of the Securities (or any securities which are derivatives thereof) to or through any person or entity; such Purchaser is not a registered broker-dealer under Section 15 of the Exchange Act or an entity engaged in a business that would require it to be so registered as a broker-dealer.

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(d) **Purchaser Status.** At the time such Purchaser was offered the Securities, it was, and at the date hereof it is, an “accredited investor” as defined in Rule 501(a) under the Securities Act.

(e) **General Solicitation.** Such Purchaser is not purchasing the Securities as a result of any advertisement, article, notice or other communication regarding the Securities published in any newspaper, magazine or similar media or broadcast over television or radio or presented at any seminar or any other general advertisement.

(f) **Experience of Such Purchaser.** Such Purchaser, either alone or together with its representatives, has such knowledge, sophistication and experience in business and financial matters so as to be capable of evaluating the merits and risks of the prospective investment in the Securities, and has so evaluated the merits and risks of such investment. Such Purchaser is able to bear the economic risk of an investment in the Securities.

(g) **Access to Information.** Such Purchaser acknowledges that it has had the opportunity to review the SEC Reports and has been afforded (i) the opportunity to ask such questions as it has deemed necessary of, and to receive answers from, representatives of the Company concerning the terms and conditions of the offering of the Securities and the merits and risks of investing in the Securities; (ii) access to information about the Company and the Subsidiaries and their respective financial condition, results of operations, business, properties, management and prospects sufficient to enable it to evaluate its investment; and (iii) the opportunity to obtain such additional information that the Company possesses or can acquire without unreasonable effort or expense that is necessary to make an informed investment decision with respect to the investment. Neither such inquiries nor any other investigation conducted by or on behalf of such Purchaser or its representatives or counsel shall modify, amend or affect such Purchaser’s right to rely on the truth, accuracy and completeness of the SEC Reports and the Company’s representations and warranties contained in the Transaction Documents. Such Purchaser has sought such accounting, legal and tax advice as it has considered necessary to make an informed decision with respect to its acquisition of the Securities.

(h) **Certain Trading Activities.** Other than with respect to the transactions contemplated herein, since the time that such Purchaser was first contacted by the Company or any other Person regarding the transactions contemplated hereby, the Purchaser has not, directly or indirectly, effected or agreed to effect any Short Sales. Other than to other Persons party to this Agreement, such Purchaser has maintained the confidentiality of all disclosures made to it in connection with this transaction (including the existence and terms of this transaction). Notwithstanding the foregoing, (i) if the Purchaser is a multi-managed investment vehicle whereby separate portfolio managers manage separate portions of the Purchaser’s assets and the portfolio managers have no direct knowledge of the investment decisions made by the portfolio managers managing other portions of the Purchaser’s assets, the representation set forth above shall only apply with respect to the portion of assets managed by the portfolio manager that made the investment decision to purchase the Securities covered by this Agreement, and (ii) in the case of a Purchaser that is affiliated with other funds or investment vehicles or whose investment advisor or sub-advisor that routinely acts on behalf of or pursuant to an understanding with such Purchaser is also an investment advisor or sub-advisor to other funds or investment vehicles, the representation set forth above shall only apply with respect to the personnel of such other funds or investment vehicles or such investment advisor or sub-advisor who had knowledge of the transaction contemplated hereby and not with respect to any personnel who have been effectively walled off by appropriate information barriers. Notwithstanding the foregoing, for avoidance of doubt, nothing contained herein shall constitute a representation or warranty, or preclude any actions, with respect to the identification of the availability of, or securing of, available shares to borrow in order to effect Short Sales or similar transactions in the future.

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(i) **Brokers and Finders.** No Person will have, as a result of the transactions contemplated by this Agreement, any valid right, interest or claim against or upon the Purchaser for any commission, fee or other compensation pursuant to any agreement, arrangement or understanding entered into by or on behalf of the Purchaser. No Purchaser shall have any obligation with respect to any fees, or with respect to any claims made by or on behalf of other Persons for fees, in each case of the type contemplated by this Section 3.2(i) that may be due in connection with the transactions contemplated by this Agreement or the Transaction Documents.

(j) **Independent Investment Decision.** Such Purchaser has independently evaluated the merits of its decision to purchase Securities pursuant to the Transaction Documents, and such Purchaser confirms that it has not relied on the advice of any other Purchaser's business and/or legal counsel in making such decision. Such Purchaser understands that nothing in this Agreement or any other materials presented by or on behalf of the Company to the Purchaser in connection with the purchase of the Securities constitutes legal, tax or investment advice. Such Purchaser has consulted such legal, tax and investment advisors as it, in its sole discretion, has deemed necessary or appropriate in connection with its purchase of the Securities.

(k) **[Reserved]**

(l) **Reliance on Exemptions.** Such Purchaser understands that the Securities being offered and sold to it in reliance on specific exemptions from the registration requirements of United States federal and state securities Laws and that the Company is relying in part upon the truth and accuracy of, and such Purchaser's compliance with, the representations, warranties, agreements, acknowledgements and understandings of such Purchaser set forth herein in order to determine the availability of such exemptions and the eligibility of such Purchaser to acquire the Securities.

(m) **No Governmental Review.** Such Purchaser understands that no United States federal or state agency or any other government or governmental agency has passed on or made any recommendation or endorsement of the Securities or the fairness or suitability of the investment in the Securities nor have such authorities passed upon or endorsed the merits of the offering of the Securities.

(n) **Regulation M.** Such Purchaser is aware that the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of Securities and other activities with respect to the Securities by the Purchasers.

(o) **Beneficial Ownership.** The purchase by such Purchaser of the Securities issuable to it at the Closing will not result in such Purchaser (individually or together with any other Person with whom such Purchaser has identified, or will have identified, itself as part of a "group" in a public filing made with the Commission involving the Company's securities) acquiring, or obtaining the right to acquire, beneficial ownership in excess of 19.99% of the outstanding shares of Common Stock or the voting power of the Company on a post-transaction basis that assumes that such Closing shall have occurred. Such Purchaser does not presently intend to, alone or together with others, make a public filing with the Commission to disclose that it has (or that it together with such other Persons have) acquired, or obtained the right to acquire, as a result of such Closing (when added to any other securities of the Company that it or they then own or have the right to acquire), beneficial ownership in excess of 19.99% of the outstanding shares of Common Stock or the voting power of the Company on a post-transaction basis that assumes that such Closing shall have occurred.

(p) **Residency.** Such Purchaser's residence (if an individual) or offices in which its investment decision with respect to the Securities was made (if an entity) are located at the address set forth under such Purchaser's name on Annex A hereto or as otherwise disclosed to the Company in writing (which writing may be an email from a Purchaser or its agent).

The Company and each of the Purchasers acknowledge and agree that no party to this Agreement has made or makes any representations or warranties with respect to the transactions contemplated hereby other than those specifically set forth in this Article III and the other Transaction Documents.

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**ARTICLE IV  
OTHER AGREEMENTS OF THE PARTIES**

**Section 4.1 Transfer Restrictions.**

(a) **Compliance with Laws.** Notwithstanding any other provision of this Article IV, each Purchaser covenants that the Securities and Warrant Shares may be disposed of only pursuant to an effective registration statement under, and in compliance with the requirements of, the Securities Act, or pursuant to an available exemption from, or in a transaction not subject to, the registration requirements of the Securities Act, and in compliance with any applicable U.S. state and federal securities Laws. In connection with any transfer of the Securities other than (i) pursuant to an effective registration statement, (ii) to the Company, (iii) pursuant to Rule 144 (provided that the Purchaser provides the Company with reasonable assurances (in the form of seller and, if applicable, broker representation letters) that the securities may be sold pursuant to such rule) or (iv) in connection with a bona fide pledge as contemplated in Section 4.1(b), the Company may require the transferor thereof to provide to the Company an opinion of counsel selected by the transferor and reasonably acceptable to the Company, the form and substance of which opinion shall be reasonably satisfactory to the Company, to the effect that such transfer does not require registration of such transferred Securities under the Securities Act. As a condition of transfer, any such transferee shall agree in writing to be bound by the terms of this Agreement and the Registration Rights Agreement and shall have the rights of a Purchaser under this Agreement and the Registration Rights Agreement with respect to such transferred Securities or Warrant Shares.

(b) **Legends.** Certificates and book-entry statements evidencing the Securities and any Warrant Shares shall bear, any legend as required by the “blue sky” Laws of any state and a restrictive legend in substantially the following form:

THE SECURITIES REPRESENTED BY THIS CERTIFICATE TO WHICH THIS CONFIRMATION RELATES HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR THE SECURITIES LAWS OF ANY STATE OF THE UNITED STATES. THE SECURITIES MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED, HYPOTHECATED, TRANSFERRED OR ASSIGNED IN THE ABSENCE OF AN EFFECTIVE REGISTRATION STATEMENT FOR THE SECURITIES UNDER APPLICABLE SECURITIES LAWS, OR UNLESS OFFERED, SOLD, PLEDGED, HYPOTHECATED OR TRANSFERRED PURSUANT TO AN AVAILABLE EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THOSE LAWS. THE COMPANY AND ITS TRANSFER AGENT SHALL BE ENTITLED TO REQUIRE AN OPINION OF COUNSEL SATISFACTORY TO THE COMPANY AND THE TRANSFER AGENT THAT SUCH REGISTRATION IS NOT REQUIRED.

The Company acknowledges and agrees that a Purchaser may from time to time pledge, and/or grant a security interest in, some or all of the legended Securities or Warrant Shares in connection with applicable securities Laws, pursuant to a bona fide margin agreement in compliance with a bona fide margin loan. Such a pledge would not be subject to approval or consent of the Company and no legal opinion of legal counsel to the pledgee, secured party or pledgor shall be required in connection with the pledge, but such legal opinion shall be required in connection with a subsequent transfer or foreclosure following default by the Purchaser transferee of the pledge. No notice shall be required of such pledge, but Purchaser’s transferee shall promptly notify the Company of any such subsequent transfer or foreclosure. Each Purchaser acknowledges that the Company shall not be responsible for any pledges relating to, or the grant of any security interest in, any of the Securities or Warrant Shares or for any agreement, understanding or arrangement between any Purchaser and its pledgee or secured party. At the appropriate Purchaser’s expense, the Company will execute and deliver such reasonable documentation as a pledgee or secured party of Securities or Warrant Shares may reasonably request in connection with a pledge or transfer of the Securities or Warrant Shares, as applicable, including the preparation and filing of any required prospectus supplement under Rule 424(b)(3) of the Securities Act or other applicable provision of the Securities Act to appropriately amend the list of selling stockholders thereunder. Each Purchaser acknowledges and agrees that, except as otherwise provided in Section 4.1(c), any Securities or Warrant Shares subject to a pledge or security interest as contemplated by this Section 4.1(b) shall continue to bear the legend set forth in this Section 4.1(b) and be subject to the restrictions on transfer set forth in Section 4.1(a).

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(c) **Removal of Legends.** Upon the earliest of such time as the Securities or Warrant Shares are (i) covered by an effective registration statement, or (ii) transferred or sold (x) to the Company or (y) pursuant to Rule 144 or other available exemption from, or in a transaction not subject to, the registration requirements of the Securities Act, and either upon request of the Purchaser, the Company shall promptly cause the legend to be removed from any certificate for any Warrant Shares in accordance with the terms of this Agreement and deliver, or cause to be delivered, to any Purchaser new certificate(s) representing the Warrant Shares that are free from all restrictive and other legends or, at the request of such Purchaser, via DWAC transfer to such Purchaser's account. In connection with any sale, assignment, transfer or other disposition of the Warrant Shares by a Purchaser pursuant to Rule 144, pursuant to any other exemption under the Securities Act or pursuant to sale under an effective registration and upon compliance by the Purchaser with the requirements of this Section 4.11, if requested by the Purchaser, the Company shall cause the Transfer Agent to remove any restrictive legends related to the book entry account holding such Warrant Shares and make a new, unlegended entry for such book entry Warrant Shares sold or disposed of without restrictive legends as soon as practicable of any such request therefor from the Purchaser and no later than two (2) Trading Days after such request, provided that the Company has received customary representations and other documentation reasonably acceptable to the Company in connection therewith. Subject to receipt by the Company of customary representations and other documentation reasonably acceptable to the Company in connection therewith, upon the earlier of such time as the Warrant Shares, (i) have been registered pursuant to an effective registration statement, (ii) have been sold pursuant to Rule 144, or (iii) are eligible for resale under Rule 144(b)(1) or any successor provision (without the requirement for the Company to comply with the current public information obligations of Rule 144(c)), the Company shall promptly, after receipt of any request therefor from a Purchaser accompanied by such customary and reasonably acceptable documentation referred to above (A) deliver to the Transfer Agent irrevocable instructions that the Transfer Agent shall make a new, unlegended entry for such book entry Warrant Shares and (B) use reasonable best efforts to cause its counsel to deliver to the Transfer Agent one or more blanket opinions to the effect that the removal of such legends in such circumstances may be effected under the Securities Act. From and after the earlier of such dates, upon a Purchaser's written request, the Company shall promptly cause certificates or book entries evidencing the Purchaser's Warrant Shares to be replaced with certificates or book entries, as the case may be, which do not bear such restrictive legends, provided the provisions of either clauses (i), (ii) or (iii) above, as applicable, are satisfied with respect to such Warrant Shares. Notwithstanding the foregoing, promptly following the one-year anniversary of the Closing, the Company shall remove any legend from the book entry position evidencing the Warrant Shares then held by non-affiliates of the Company. The Company shall be responsible for the fees of its Transfer Agent associated with such issuance.

(d) [Reserved]

**Section 4.2 Furnishing of Information.** In order to enable the Purchasers to sell the Securities and Warrant Shares under Rule 144, until such time as Purchaser may sell the Securities and Warrant Shares without limitation under Rule 144, the Company shall use its commercially reasonable efforts to timely file (or obtain extensions in respect thereof and file within the applicable grace period) all reports required to be filed by the Company after the date hereof pursuant to the Exchange Act and, if during such period, the Company is not required to file reports pursuant to the Exchange Act, it will prepare and furnish to the Purchasers and make publicly available in accordance with Rule 144(c) such information as is required for the Purchasers to sell the Securities under Rule 144.

**Section 4.3 Integration.** The Company shall not, and shall use its commercially reasonable efforts to ensure that no Affiliate of the Company shall, sell, offer for sale or solicit offers to buy or otherwise negotiate in respect of any security (as defined in Section 2 of the Securities Act) that will be integrated with the offer or sale of the Securities or Warrant Shares in a manner that would require the registration under the Securities Act of the sale of the Securities or Warrant Shares to the Purchasers, or that will be integrated with the offer or sale of the Securities or Warrant Shares for purposes of the rules and regulations of any Trading Market such that it would require stockholder approval prior to the closing of such other transaction unless stockholder approval is obtained before the closing of such subsequent transaction.

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**Section 4.4 Securities Laws Disclosure; Publicity.** By the Disclosure Time, the Company shall issue a press release (the “*Press Release*”) disclosing all material, non-public information delivered to any of the Purchasers by the Company, any Subsidiary or any of their respective officers, directors, employees or agents in connection with the transactions contemplated by the Transaction Documents. On or before 9:00 A.M., New York City time, on the second (2nd) Trading Day immediately following the execution of this Agreement, the Company will file a Current Report on Form 8-K with the Commission describing the terms of the Transaction Documents (and including as exhibits to such Current Report on Form 8-K the material Transaction Documents (including, without limitation, this Agreement, the Registration Rights Agreement and the form of Pre-Funded Warrant)). Notwithstanding the foregoing, the Company shall not publicly disclose the name of any Purchaser or investment adviser of any Purchaser, or include the name of any Purchaser or an Affiliate of or investment adviser to any Purchaser, without the prior written consent of such Purchaser (i) in any press release or marketing materials, (ii) in any filing with the Commission (other than the Registration Statement) or any regulatory agency or Trading Market, except with respect to clause (ii) as required by U.S. federal securities law in connection with (A) any registration statement contemplated by the Registration Rights Agreement or (B) the filing of final Transaction Documents (including signature pages thereto) with the Commission or (iii) to the extent such disclosure is required by law, request of the Commission’s staff or Trading Market regulations, in which case the Company shall provide such Purchaser with prior written notice of and an opportunity to review such disclosure permitted under subclause (iii). From and after the issuance of the Press Release, no Purchaser shall be in possession of any material, non-public information received from the Company, any Subsidiary or any of their respective officers, directors, employees or agents. In addition, effective upon the issuance of such press release, the Company acknowledges and agrees that any and all confidentiality or similar obligations under this Agreement, or an agreement entered into in connection with the transactions contemplated by the Transaction Documents, whether written or oral, between the Company, any of its Subsidiaries or any of their respective officers, directors, agents, employees or Affiliates, on the one hand, and any of the Purchasers or any of their respective officers, directors, agents, employees or investment advisers, on the other hand, shall terminate; provided each Purchaser, severally and not jointly with any other Purchaser, covenants that until such time as the transactions contemplated by this Agreement are required to be publicly disclosed by the Company as described in this Section 4.4, such Purchaser will maintain the confidentiality of all disclosures made to it in connection with this transaction (including the existence and terms of this transaction).

**Section 4.5 Shareholder Rights Plan.** No claim will be made or enforced by the Company or, with the consent of the Company, any other Person, that any Purchaser is an “*Acquiring Person*” under any control share acquisition, business combination, poison pill (including any distribution under a rights agreement) or similar anti-takeover plan or arrangement or Law (including Section 203 of the Delaware General Corporation Law) in effect or hereafter adopted by the Company, or that any Purchaser could be deemed to trigger the provisions of any such plan or arrangement, in either case solely by virtue of receiving Securities or Warrant Shares under the Transaction Documents.

**Section 4.6 Non-Public Information.** Except with respect to the material terms and conditions of the transactions contemplated by the Transaction Documents, including this Agreement, or as expressly required by any applicable securities Law, the Company covenants and agrees that neither it, nor any other Person acting on its behalf, will provide any Purchaser or its agents or counsel with any information regarding the Company that the Company believes constitutes material non-public information without the express written consent of such Purchaser, unless prior thereto such Purchaser shall have executed a written agreement regarding the confidentiality and use of such information. The Company understands and confirms that each Purchaser shall be relying on the foregoing covenant in effecting transactions in securities of the Company.

**Section 4.7 Use of Proceeds.** The Company shall use the net proceeds from the sale of the Securities hereunder for working capital and general corporate purposes.

**Section 4.8 Principal Trading Market Listing.** In the time and manner required by the Principal Trading Market, the Company shall prepare and file with such Principal Trading Market an additional shares listing application covering all of the Securities and Warrant Shares and shall use its commercially reasonable efforts to take all steps necessary to cause all of the Securities and Warrant Shares to be approved for listing on the Principal Trading Market as promptly as possible thereafter, subject to notice of issuance.

**Section 4.9 Form D; Blue Sky.** The Company agrees to timely file a Form D with respect to the Securities as required under Regulation D of the Securities Act and to provide a copy thereof, promptly upon the written request of any Purchaser. The Company, on or before the Closing Date, shall take such action as the Company shall reasonably determine is necessary in order to obtain an exemption for or to qualify the Securities for sale to the Purchasers under applicable securities or “Blue Sky” Laws of the states of the United States (or to obtain an exemption from such qualification) and shall provide evidence of such actions promptly upon the written request of any Purchaser.

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**Section 4.10 Short Sales After the Date Hereof** Such Purchaser shall not engage, directly or indirectly, in any transactions in the Company's securities (including, without limitation, any Short Sales involving the Company's securities) during the period from the date hereof until the earlier of such time as (i) the transactions contemplated by this Agreement are first publicly announced as required by and described in Section 4.4 or (ii) this Agreement is terminated in full pursuant to Section 6.18.

Notwithstanding the foregoing, no Purchaser makes any representation, warranty or covenant hereby that it will not engage in Short Sales in the securities of the Company after the time that the transactions contemplated by this Agreement are first publicly announced as described in Section 4.4. For purposes of this Section 4.10, a "**Net Short Sale**" by any Purchaser shall mean a sale of Common Stock by such Purchaser that is marked as a short sale and that is made at a time when there is no equivalent offsetting long position in Common Stock held by such Purchaser. Notwithstanding the foregoing, in the event that a Purchaser is a multi-managed investment vehicle whereby separate portfolio managers manage separate portions of such Purchaser's assets and the portfolio managers have no direct knowledge of the investment decisions made by the portfolio managers managing other portions of such Purchaser's assets, the representation set forth above shall apply only with respect to the portion of assets managed by the portfolio manager that have knowledge about the financing transaction contemplated by this Agreement. Moreover, notwithstanding the foregoing, in the event that a Purchaser has sold Securities pursuant to Rule 144 prior to the Effective Date of the initial Registration Statement and the Company has failed to deliver certificates without legends prior to the settlement date for such sale (assuming that such certificates meet the requirements set forth in Section 4.1(c) for the removal of legends), the provisions of this Section 4.10 shall not prohibit the Purchaser from entering into Net Short Sales for the purpose of delivering shares of Common Stock in settlement of such sale. Each Purchaser understands and acknowledges, severally and not jointly with any other Purchaser, that the Commission currently takes the position that covering a short position established prior to effectiveness of a resale registration statement with shares included in such registration statement would be a violation of Section 5 of the Securities Act, as set forth in Item 65, Section 5 under Section A, of the Manual of Publicly Available Telephone Interpretations, dated July 1997, compiled by the Office of Chief Counsel, Division of Corporation Finance.

**Section 4.11 [Reserved]**

**Section 4.12 Exercise Procedures.** The form of Exercise Notice included in the Pre-Funded Warrant sets forth the totality of the procedures required of the Purchasers in order to exercise the Pre-Funded Warrants. Without limiting the preceding sentence, no ink-original Exercise Notice shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Exercise Notice form be required in order for the registered holder thereof to exercise the Pre-Funded Warrants. No additional legal opinion, other information or instructions shall be required of a Purchaser to exercise its Pre-Funded Warrants. The Company shall honor exercises of the Pre-Funded Warrants and shall deliver Warrant Shares in accordance with the terms, conditions and time periods set forth in the Transaction Documents.

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**Section 4.13 Indemnification of Purchasers.** Subject to the provisions of this Section 4.13, the Company will indemnify and hold each Purchaser and its directors, officers, shareholders, members, managers, partners, employees, investment advisers and agents (and any other Persons with a functionally equivalent role of a Person holding such titles notwithstanding a lack of such title or any other title), each Person who controls such Purchaser (within the meaning of Section 15 of the Securities Act and Section 20 of the Exchange Act), and the directors, officers, shareholders, agents, members, managers, partners, investment advisers or employees (and any other Persons with a functionally equivalent role of a Person holding such titles notwithstanding a lack of such title or any other title) of such controlling persons (each, a “**Purchaser Party**”) harmless from any and all losses, liabilities, obligations, claims, contingencies, damages, costs and expenses, including all judgments, amounts paid in settlements, court costs and reasonable attorneys’ fees and costs of investigation that any such Purchaser Party may suffer or incur as a result of or relating to (i) any breach of any of the representations, warranties, covenants or agreements made by the Company in this Agreement or in the other Transaction Documents or (ii) any Action instituted against a Purchaser in any capacity, or any Purchaser Party, by any stockholder of the Company who is not an Affiliate of such Purchaser seeking indemnification, with respect to any of the transactions contemplated by the Transaction Documents (unless such Action is based upon a breach of such Purchaser’s representations, warranties or covenants under the Transaction Documents, or any agreements or understandings such Purchaser may have with any such stockholder or any violations by the Purchaser of state or federal securities Laws or any conduct by such Purchaser which constitutes fraud, gross negligence, willful misconduct or malfeasance). Promptly after receipt by any such Person (the “**Indemnified Person**”) of notice of any demand, claim or circumstances which would or might give rise to a claim or the commencement of any Proceeding or investigation in respect of which indemnity may be sought pursuant to this Section 4.13, such Indemnified Person shall promptly notify the Company in writing and the Company shall assume the defense thereof, including the employment of counsel reasonably satisfactory to such Indemnified Person, and shall assume the payment of all fees and expenses relating to such Proceeding or investigation; provided, however, that the failure of any Indemnified Person so to notify the Company shall not relieve the Company of its obligations hereunder except to the extent that the Company is actually and materially prejudiced by such failure to notify. In any such proceeding, any Indemnified Person shall have the right to retain its own counsel, but the fees and expenses of such counsel shall be at the expense of such Indemnified Person unless: (i) the Company and the Indemnified Person shall have mutually agreed to the retention of such counsel; (ii) the Company shall have failed promptly to assume the defense of such proceeding and to employ counsel reasonably satisfactory to such Indemnified Person in such proceeding; or (iii) in the reasonable judgment of counsel to such Indemnified Person, representation of both parties by the same counsel would be inappropriate due to actual or potential differing interests between them. The Company shall not be liable for any settlement of any proceeding effected without its prior written consent, which consent shall not be unreasonably withheld, delayed or conditioned or to the extent fees or costs incurred pursuant to this Section 4.13 are attributable to the Indemnified Person’s breach of any of the representations, warranties, covenants or agreements made by the Purchasers in this Agreement or the other Transaction Documents. Without the prior written consent of the Indemnified Person, which consent shall not be unreasonably withheld, delayed or conditioned, the Company shall not effect any settlement of any pending or threatened proceeding in respect of which any Indemnified Person is or could have been a party and indemnity could have been sought hereunder by such Indemnified Person, unless such settlement includes an unconditional release of such Indemnified Person from all liability arising out of such proceeding.

#### ARTICLE V CONDITIONS PRECEDENT TO CLOSING

**Section 5.1 Conditions Precedent to the Obligations of the Purchasers to Purchase Securities** The obligation of each Purchaser to acquire Securities at the Closing is subject to the fulfillment to such Purchaser’s satisfaction, on or prior to the Closing Date, of each of the following conditions, any of which may be waived by such Purchaser (as to itself only):

(a) **Representations and Warranties.** The representations and warranties of the Company contained herein shall be true and correct in all respects as of the date when made and as of the Closing Date, as though made on and as of such date, except for such representations and warranties that speak as of a specific date.

(b) **Performance.** The Company shall have performed, satisfied and complied in all material respects with all covenants, agreements and conditions required by the Transaction Documents to be performed, satisfied or complied with by it at or prior to the Closing.

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(c) **No Injunction.** No statute, rule, regulation, order, executive order, decree, ruling, writ, award or injunction shall have been enacted, entered, promulgated or endorsed by any court or Governmental Authority of competent jurisdiction, and no Action or Proceeding shall have been instated by any Governmental Authority, that prohibits or enjoins the consummation of any of the transactions contemplated by the Transaction Documents.

(d) **Consents.** The Company shall have obtained in a timely fashion any and all consents, permits, approvals, registrations and waivers necessary for consummation of the purchase and sale of the Securities (including the waiver of any applicable registration rights that could affect the rights of the Purchasers under the Registration Rights Agreement), all of which shall be and remain so long as necessary in full force and effect.

(e) **Adverse Changes.** Since the date of execution of this Agreement, no event or series of events shall have occurred that has had or would reasonably be expected to have a Material Adverse Effect.

(f) **No Suspensions of Trading in Common Stock; Listing** The Common Stock shall not have been suspended, as of the Closing Date, by the Commission or the Principal Trading Market from trading on the Principal Trading Market nor shall suspension by the Commission or the Principal Trading Market have been threatened, as of the Closing Date, either (i) in writing by the Commission or the Principal Trading Market or (ii) by falling below the minimum listing maintenance requirements of the Principal Trading Market; and the Company shall have filed with the Principal Trading Market a listing notice for the listing of the Warrant Shares and shall have received no objections to such notice from the Principal Trading Market.

(g) **Company Deliverables.** The Company shall have delivered the Company Deliverables in accordance with Section 2.3(a).

(h) **Compliance Certificate.** The Company shall have delivered to each Purchaser a certificate, dated as of the Closing Date and signed by its Chief Executive Officer or its Chief Financial Officer, dated as of the Closing Date, certifying to the fulfillment of the conditions specified in Sections 5.1(a), (b), (c), (f) and (j) in the form attached hereto as **Exhibit D**.

(i) **Termination.** This Agreement shall not have been terminated as to such Purchaser in accordance with Section 6.18 herein.

**Section 5.2 Conditions Precedent to the Obligations of the Company to issue Securities** The Company's obligation to issue the Securities at the Closing to each Purchaser is subject to the fulfillment to the satisfaction of the Company on or prior to the Closing Date of the following conditions, any of which may be waived by the Company:

(a) **Representations and Warranties.** The representations and warranties made by each Purchaser in Section 3.2 hereof shall be true and correct in all material respects (except for those representations and warranties which are qualified as to materiality, in which case such representations and warranties shall be true and correct in all respects) as of the date when made, and as of the Closing Date as though made on and as of such date, except for representations and warranties that speak as of a specific date.

(b) **Performance.** Such Purchaser shall have performed, satisfied and complied in all material respects with all covenants, agreements and conditions required by the Transaction Documents to be performed, satisfied or complied with by such Purchaser at or prior to the Closing Date.

(c) **No Injunction.** No statute, rule, regulation, order, executive order, decree, ruling, writ, award or injunction shall have been enacted, entered, promulgated or endorsed by any court or Governmental Authority of competent jurisdiction, and no Action or Proceeding shall have been instated by any Governmental Authority, that prohibits or enjoins the consummation of any of the transactions contemplated by the Transaction Documents.

(d) **Purchasers Deliverables.** Such Purchaser shall have delivered its Purchaser Deliverables in accordance with Section 2.3(b).

(e) **Termination.** This Agreement shall not have been terminated as to such Purchaser in accordance with Section 6.18 herein.

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**ARTICLE VI  
MISCELLANEOUS**

**Section 6.1 Fees and Expenses.** The Company and the Purchasers shall each pay the fees and expenses of their respective advisers, counsel, accountants and other experts, if any, and all other expenses incurred by such party in connection with the negotiation, preparation, execution, delivery and performance of this Agreement. The Company shall pay all Transfer Agent fees, stamp taxes and other taxes and duties levied in connection with the issuance and sale of the Securities to the Purchasers.

**Section 6.2 Entire Agreement.** The Transaction Documents, together with the exhibits and schedules thereto, contain the entire understanding of the parties with respect to the subject matter hereof and thereof and supersede all prior agreements, understandings, discussions and representations, oral or written, with respect to such matters, which the parties acknowledge have been merged into such documents, exhibits and schedules. At or after the Closing, and without further consideration, the Company and the Purchasers will execute and deliver to the other such further documents as may be reasonably requested in order to give practical effect to the intention of the parties under the Transaction Documents.

**Section 6.3 Notices.** Any and all notices or other communications or deliveries required or permitted to be provided hereunder shall be in writing and shall be deemed given and effective on the earliest of (a) the date of transmission, if such notice or communication is delivered via electronic mail at the e-mail address specified in this Section 6.3 prior to 5:00 P.M., New York City time, on a Trading Day (with no rejection notice received), (b) the next Trading Day after the date of transmission, if such notice or communication is delivered via electronic mail at the e-mail address or facsimile number specified in this Section 6.3 on a day that is not a Trading Day or later than 5:00 P.M., New York City time, on any Trading Day (with no rejection notice received), (c) the Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service with next day delivery specified, or (d) upon actual receipt by the party to whom such notice is required to be given. The address for such notices and communications shall be as follows:

If to the Company:

Monopar Therapeutics Inc.  
1000 Skokie Blvd., Suite 350  
Wilmette, IL 60091  
Attention:  
email:

With a copy to:

Baker & Hostetler LLP  
Key Tower, 127 Public Square  
Suite 2000  
Cleveland, OH 44114  
Telephone No.: (216) 861-6697  
Attention:  
E-mail:

If to a Purchaser: To the address set forth under such Purchaser's name on Annex A hereto;

or such other address as may be designated in writing hereafter, in the same manner, by such Person.

**Section 6.4 Amendments; Waivers; No Additional Consideration.** No provision of this Agreement may be waived, modified, supplemented or amended except in a written instrument signed, in the case of an amendment, by the Company and the Purchasers who collectively have subscribed to purchase at least a majority in interest of the Securities, provided that no amendment to Section 4.11, Section 4.13 or Section 6.18 may be made without the consent of each Purchaser, or, in the case of a waiver, by the party against whom enforcement of any such waiver is sought. No waiver of any default with respect to any provision, condition or requirement of this Agreement shall be deemed to be a continuing waiver in the future or a waiver of any subsequent default or a waiver of any other provision, condition or requirement hereof, nor shall any delay or omission of either party to exercise any right hereunder in any manner impair the exercise of any such right. No consideration shall be offered or paid to any Purchaser to amend or consent to a waiver or modification of any provision of any Transaction Document unless the same consideration is also offered to each Purchaser who then holds Securities. For clarification purposes, this provision constitutes a separate right granted to each Purchaser by the Company and negotiated separately by each Purchaser, and is intended for the Company to treat the Purchasers as a class and shall not in any way be construed as the Purchasers acting in concert or as a group with respect to the purchase, disposition or voting of Common Stock or otherwise.

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**Section 6.5 Construction.** The headings herein are for convenience only, do not constitute a part of this Agreement and shall not be deemed to limit or affect any of the provisions hereof. The language used in this Agreement will be deemed to be the language chosen by the parties to express their mutual intent, and no rules of strict construction will be applied against any party. This Agreement shall be construed as if drafted jointly by the parties, and no presumption or burden of proof shall arise favoring or disfavoring any party by virtue of the authorship of any provisions of this Agreement or any of the Transaction Documents.

**Section 6.6 Successors and Assigns.** The provisions of this Agreement shall inure to the benefit of and be binding upon the parties and their successors and permitted assigns. This Agreement, or any rights or obligations hereunder, may not be assigned by the Company without the prior written consent of each Purchaser. Any Purchaser may assign its rights hereunder in whole or in part to any Person to whom such Purchaser assigns or transfers any Securities in compliance with the Transaction Documents and applicable Law, provided such transferee shall agree in writing to be bound, with respect to the transferred Securities, by the terms and conditions of this Agreement that apply to the Purchasers.

**Section 6.7 No Third-Party Beneficiaries.** This Agreement is intended for the benefit of the parties hereto and their respective successors and permitted assigns and is not for the benefit of, nor may any provision hereof be enforced by, any other Person, except as expressly set forth herein.

**Section 6.8 Governing Law.** All questions concerning the construction, validity, enforcement and interpretation of this Agreement shall be governed by and construed and enforced in accordance with the internal Laws of the State of New York, without regard to the principles of conflicts of law thereof. Each party agrees that all Proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Agreement and any other Transaction Documents (whether brought against a party hereto or its respective Affiliates, employees or agents) shall be commenced exclusively in the New York Courts. Each party hereto hereby irrevocably submits to the exclusive jurisdiction of the New York Courts for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein (including with respect to the enforcement of any of the Transaction Documents), and hereby irrevocably waives, and agrees not to assert in any Proceeding, any claim that it is not personally subject to the jurisdiction of any such New York Court, or that such Proceeding has been commenced in an improper or inconvenient forum. To the extent that the Company has or hereafter may acquire any immunity (on the grounds of sovereignty or otherwise) from the jurisdiction of any court or from any legal process with respect to itself or its property, the Company irrevocably waives, to the fullest extent permitted by law, such immunity in respect of any such suit, action or proceeding. Each party hereto hereby irrevocably waives personal service of process and consents to process being served in any such Proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law. EACH PARTY HERETO HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL PROCEEDING ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY.

**Section 6.9 Survival.** Subject to applicable statute of limitations, the representations, warranties, agreements and covenants contained herein shall survive the Closing and the delivery of the Securities.

**Section 6.10 Execution.** This Agreement may be executed in two or more counterparts, all of which when taken together shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to the other party, it being understood that both parties need not sign the same counterpart. In the event that any signature is delivered by facsimile transmission, or by e-mail delivery of a “.pdf” format data file, such signature shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such facsimile signature page were an original thereof.

**Section 6.11 Severability.** If any provision of this Agreement is held to be invalid or unenforceable in any respect, the validity and enforceability of the remaining terms and provisions of this Agreement shall not in any way be affected or impaired thereby and the parties will attempt to agree upon a valid and enforceable provision that is a reasonable substitute therefor, and upon so agreeing, shall incorporate such substitute provision in this Agreement.

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**Section 6.12 Rescission and Withdrawal Right.** Notwithstanding anything to the contrary contained in (and without limiting any similar provisions of) the Transaction Documents, whenever any Purchaser exercises a right, election, demand or option under a Transaction Document and the Company does not timely perform its related obligations within the periods therein provided, then such Purchaser may rescind or withdraw, in its sole discretion from time to time upon written notice to the Company, any relevant notice, demand or election in whole or in part without prejudice to its future actions and rights.

**Section 6.13 Replacement of Securities.** If any certificate or instrument evidencing any Securities or Warrant Shares is mutilated, lost, stolen or destroyed, the Company may issue or cause to be issued in exchange and substitution for and upon cancellation thereof, or in lieu of and substitution therefor, a new certificate or instrument, but only upon receipt of evidence reasonably satisfactory to the Company and the Transfer Agent of such loss, theft or destruction and the execution by the holder thereof of a customary lost certificate affidavit of that fact and an agreement to indemnify and hold harmless the Company and the Transfer Agent for any losses in connection therewith or, if required by the Transfer Agent, a bond in such form and amount as is required by the Transfer Agent. The applicants for a new certificate or instrument under such circumstances shall also pay any reasonable third-party costs associated with the issuance of such replacement Securities or Warrant Shares. If a replacement certificate or instrument evidencing any Securities or Warrant Shares is requested due to a mutilation thereof, the Company may require delivery of such mutilated certificate or instrument as a condition precedent to any issuance of a replacement.

**Section 6.14 Remedies.** In addition to being entitled to exercise all rights provided herein or granted by law, including recovery of damages, each of the Purchasers and the Company will be entitled to specific performance under the Transaction Documents. The parties agree that monetary damages may not be adequate compensation for any loss incurred by reason of any breach of obligations described in the foregoing sentence and hereby agree to waive in any action for specific performance of any such obligation (other than in connection with any action for a temporary restraining order) the defense that a remedy at law would be adequate.

**Section 6.15 Payment Set Aside.** To the extent that the Company makes a payment or payments to any Purchaser pursuant to any Transaction Document or a Purchaser enforces or exercises its rights thereunder, and such payment or payments or the proceeds of such enforcement or exercise or any part thereof are subsequently invalidated, declared to be fraudulent or preferential, set aside, recovered from, disgorged by or are required to be refunded, repaid or otherwise restored to the Company, a trustee, receiver or any other person under any Law (including, without limitation, any bankruptcy Law, state or federal Law, common law or equitable cause of action), then to the extent of any such restoration the obligation or part thereof originally intended to be satisfied shall be revived and continued in full force and effect as if such payment had not been made or such enforcement or setoff had not occurred.

**Section 6.16 [Reserved]**

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**Section 6.17 Independent Nature of Purchasers' Obligations and Rights.** The obligations of each Purchaser under any Transaction Document are several and not joint with the obligations of any other Purchaser, and no Purchaser shall be responsible in any way for the performance of the obligations of any other Purchaser under any Transaction Document. The decision of each Purchaser to purchase Securities pursuant to the Transaction Documents has been made by such Purchaser independently of any other Purchaser and independently of any information, materials, statements or opinions as to the business, affairs, operations, assets, properties, liabilities, results of operations, condition (financial or otherwise) or prospects of the Company or any Subsidiary which may have been made or given by any other Purchaser or by any agent or employee of any other Purchaser, and no Purchaser and any of its agents or employees shall have any liability to any other Purchaser (or any other Person) relating to or arising from any such information, materials, statement or opinions. Nothing contained herein or in any Transaction Document, and no action taken by any Purchaser pursuant thereto, shall be deemed to constitute the Purchasers as a partnership, an association, a joint venture or any other kind of entity, or create a presumption that the Purchasers are in any way acting in concert or as a group with respect to such obligations or the transactions contemplated by the Transaction Documents. Each Purchaser acknowledges that no other Purchaser has acted as agent for such Purchaser in connection with making its investment hereunder and that no Purchaser will be acting as agent of such Purchaser in connection with monitoring its investment in the Securities or enforcing its rights under the Transaction Documents. Each Purchaser shall be entitled to independently protect and enforce its rights, including without limitation the rights arising out of this Agreement or out of the other Transaction Documents, and it shall not be necessary for any other Purchaser to be joined as an additional party in any proceeding for such purpose. Each Purchaser has been represented by its own separate legal counsel in its review and negotiation of the Transaction Documents. The Company has elected to provide all Purchasers with the same terms and Transaction Documents for the convenience of the Company and not because it was required or requested to do so by any Purchaser. It is expressly understood and agreed that each provision contained in this Agreement and in each other Transaction Document is between the Company and a Purchaser, solely, and not between the Company and the Purchasers collectively and not between and among the Purchasers.

**Section 6.18 Termination.** This Agreement may be terminated and the sale and purchase of the Securities abandoned at any time prior to the Closing by either the Company or any Purchaser (with respect to itself only) upon written notice to the other, if the Closing has not been consummated on or prior to 5:00 P.M., New York City time, on the Outside Date; provided, however, that the right to terminate this Agreement under this clause shall not be available to any Person whose failure to comply with its obligations under this Agreement has been the cause of or resulted in the failure of the Closing to occur on or before such time. Nothing in this Section 6.18 shall be deemed to release any party from any liability for any breach by such party of the terms and provisions of this Agreement or the other Transaction Documents or to impair the right of any party to compel specific performance by any other party of its obligations under this Agreement or the other Transaction Documents. In the event of a termination pursuant to this Section 6.18, the Company shall promptly notify all non-terminating Purchasers. Upon a termination in accordance with this Section 6.18, the Company and the terminating Purchaser(s) shall not have any further obligation or liability (including arising from such termination) to the other, and no Purchaser will have any liability to any other Purchaser under the Transaction Documents as a result therefrom.

**Section 6.19 Exculpation of the Placement Agent.** Each party hereto agrees for the express benefit of the Placement Agent, its affiliates and their respective representatives that:

(a) Neither the Placement Agent nor any of its affiliates or any of their respective representatives (i) has any duties or obligations other than those specifically set forth herein or in the engagement letter between the Company and the Placement Agent (the "Engagement Letter"); (ii) shall be liable for any improper payment made in accordance with the information provided by the Company; (iii) makes any representation or warranty, or has any responsibilities as to the validity, accuracy, value or genuineness of any information, certificates or documentation delivered by or on behalf of the Company pursuant to this Agreement or the Transaction Documents or in connection with any of the transactions contemplated hereby and thereby; or (iv) shall be liable (x) for any action taken, suffered or omitted by any of them in good faith and reasonably believed to be authorized or within the discretion or rights or powers conferred upon it by this Agreement or any Transaction Document or (y) for anything which any of them may do or refrain from doing in connection with this Agreement or any Transaction Document, except for such party's own gross negligence or willful misconduct.

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(b) The Placement Agent, its affiliates and their respective representatives shall be entitled to (i) rely on, and shall be protected in acting upon, any certificate, instrument, opinion, notice, letter or any other document or security delivered to any of them by or on behalf of the Company, including the representations made by the Company and the Purchasers herein, and (ii) be indemnified by the Company for acting as the Placement Agent hereunder pursuant to the indemnification provisions set forth in the Engagement Letter.

**Section 6.20 [Reserved].**

**Section 6.21 Arm's Length Transaction.** The Company acknowledges and agrees that (i) the transactions described in this Agreement are an arm's-length commercial transaction between the parties, (ii) the Purchaser has not assumed nor will it assume an advisory or fiduciary responsibility in the Company's favor with respect to any of the transactions contemplated by this Agreement or the process leading thereto, and no Purchaser has any obligation to the Company with respect to the transactions contemplated by this Agreement except those obligations expressly set forth in this Agreement or the other Transaction Documents to which such Purchaser is a party, (iii) any advice given by any Purchaser or any of its representatives or agents in connection with the transactions described in this Agreement or the other Transaction Documents to which such Purchaser is a party is merely incidental to such Purchaser's purchase of its Securities, and (iv) the Company's decision to enter into the Transaction Documents has been based solely on the independent evaluation by the Company and its representatives.

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**IN WITNESS WHEREOF**, the parties hereto have caused this Securities Purchase Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

**MONOPAR THERAPEUTICS INC.**

By: /s/ Chandler D. Robinson

Name: Chandler D. Robinson  
Title: Chief Executive Officer

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**IN WITNESS WHEREOF**, the parties hereto have caused this Securities Purchase Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

**PURCHASERS:**

By: \_\_\_\_\_

Name:

Title:

Address:

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ANNEX A

SCHEDULE OF PURCHASERS

Purchaser Name and Address	Beneficial Ownership Limitation	Number of Pre-Funded Warrant Shares Purchased	Aggregate Purchase Price
<b>Total:</b>			

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**EXHIBIT A**  
**REGISTRATION RIGHTS AGREEMENT**

(see attached)

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**EXHIBIT C**  
**SECRETARY'S CERTIFICATE**

(see attached)

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**EXHIBIT D**  
**COMPLIANCE CERTIFICATE**

(see attached)

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**EXHIBIT E**

**FORM OF PRE-FUNDED WARRANT**

(see attached)

## REGISTRATION RIGHTS AGREEMENT

This Registration Rights Agreement (this “*Agreement*”) is dated as of December 23, 2024, by and among Monopar Therapeutics Inc., a Delaware corporation (the “*Company*”), and the several purchasers signatory hereto (each, including its successors and assigns, a “*Purchaser*” and collectively, the “*Purchasers*”).

This Agreement is made pursuant to the Securities Purchase Agreement, dated as of December 20, 2024, between the Company and each Purchaser (the “*Purchase Agreement*”).

**NOW, THEREFORE, IN CONSIDERATION** of the mutual covenants contained in this Agreement, and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the Company and each of the Purchasers agree as follows:

**Section 1 Definitions.** Capitalized terms used and not otherwise defined herein that are defined in the Purchase Agreement shall have the meanings given such terms in the Purchase Agreement. As used in this Agreement, the following terms shall have the following meanings:

“*Advice*” has the meaning set forth in Section 6(d).

“*Affiliate*” means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person, as such terms are used in and construed under Rule 405 of the Securities Act of 1933, as amended.

“*Agreement*” has the meaning set forth in the Preamble.

“*Board*” has the meaning set forth in Section 3(c).

“*Business Day*” means any day except any Saturday, any Sunday, any day which is a federal legal holiday in the United States or any day on which banking institutions in the State of New York are authorized or required by law or other governmental action to close.

“*Common Stock*” means the Company’s common stock, par value \$0.001 per share, and stock of any other class of securities into which such securities may hereafter be reclassified or changed.

“*Company*” has the meaning set forth in the Preamble.

“*Effective Date*” means the date that the Registration Statement filed pursuant to Section 2(a) is first declared effective by the Commission.

“*Effectiveness Deadline*” means, with respect to the Initial Registration Statement or the New Registration Statement, the thirtieth (30th) calendar day following the Filing Deadline (or, in the event the Commission reviews and has written comments to the Initial Registration Statement or the New Registration Statement, the sixtieth (60th) calendar day following the Filing Deadline); provided, however, that if the Company is notified by the Commission that the Initial Registration Statement or the New Registration Statement will not be reviewed or is no longer subject to further review and comments, the Effectiveness Deadline as to such Registration Statement shall be the fifth (5th) Trading Day following the date on which the Company is so notified if such date precedes the dates otherwise required above; provided, further, that if the Effectiveness Deadline falls on a Saturday, Sunday or other day that the Commission is closed for business, the Effectiveness Deadline shall be extended to the next Business Day on which the Commission is open for business.

“*Effectiveness Period*” has the meaning set forth in Section 2(b).

“*Exchange Act*” means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

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**“Filing Deadline”** means, with respect to the Initial Registration Statement required to be filed pursuant to Section 2(a), the thirtieth (30th) calendar day following the Closing Date, provided, however, that if the Filing Deadline falls on a Saturday, Sunday or other day that the Commission is closed for business, the Filing Deadline shall be extended to the next business day on which the Commission is open for business.

**“Holder”** or **“Holders”** means the holder or holders, as the case may be, from time to time of Registrable Securities.

**“Indemnified Party”** has the meaning set forth in Section 5(c).

**“Indemnifying Party”** has the meaning set forth in Section 5(c).

**“Initial Registration Statement”** has the meaning set forth in Section 2(a).

**“Losses”** has the meaning set forth in Section 5(a).

**“New Registration Statement”** has the meaning set forth in Section 2(a).

**“Person”** means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

**“Pre-Funded Warrants”** means the pre-funded warrants, dated on or around the date hereof, between the Company and the applicable Purchasers to acquire that number of shares of Common Stock, with an exercise price of \$0.001 per share, in accordance with the terms and provisions of the Purchase Agreement.

**“Principal Market”** means the Trading Market on which the Common Stock are primarily listed on and quoted for trading, which, as of the Closing Date, shall be the Nasdaq Capital Market.

**“Proceeding”** means an action, claim, suit, investigation or proceeding (including, without limitation, an investigation or partial proceeding, such as a deposition), whether commenced or threatened.

**“Prospectus”** means the prospectus included in a Registration Statement (including, without limitation, a prospectus that includes any information previously omitted from a prospectus filed as part of an effective registration statement in reliance upon Rule 430B promulgated under the Securities Act), as amended or supplemented by any prospectus supplement, with respect to the terms of the offering of any portion of the Registrable Securities covered by a Registration Statement, and all other amendments and supplements to the Prospectus, including post-effective amendments, and all material incorporated by reference or deemed to be incorporated by reference in such Prospectus.

**“Purchase Agreement”** has the meaning set forth in the Recitals.

**“Purchaser”** or **“Purchasers”** has the meaning set forth in the Preamble.

**“Registrable Securities”** means all of (i) the Shares and (ii) any securities issued or issuable upon any stock split, dividend or other distribution, recapitalization or similar event with respect to the foregoing, provided, that the Holder has completed and delivered to the Company a Selling Shareholder Questionnaire; and provided, further, that with respect to a particular Holder, such Holder’s Shares shall cease to be Registrable Securities upon the earliest to occur of the following: (A) a sale pursuant to a Registration Statement or Rule 144 under the Securities Act (in which case, only such security sold by the Holder shall cease to be a Registrable Security); or (B) becoming eligible for resale by the Holder under Rule 144 without the requirement for the Company to be in compliance with the current public information required thereunder and without volume or manner-of-sale restrictions, pursuant to a written opinion letter of counsel for the Company to such effect, addressed, delivered and reasonably acceptable to the Transfer Agent.

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**“Registration Statements”** means any one or more registration statements of the Company filed under the Securities Act that covers the resale of any of the Registrable Securities pursuant to the provisions of this Agreement (including without limitation the Initial Registration Statement, the New Registration Statement and any Remainder Registration Statements), amendments and supplements to such Registration Statements, including post-effective amendments, all exhibits and all material incorporated by reference or deemed to be incorporated by reference in such Registration Statements.

**“Remainder Registration Statement”** has the meaning set forth in Section 2(a).

**“Rule 144”** means Rule 144 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same effect as such Rule.

**“Rule 415”** means Rule 415 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same effect as such Rule.

**“Rule 424”** means Rule 424 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same effect as such Rule.

**“SEC Guidance”** means (i) any publicly-available written or oral guidance, comments, requirements or requests of the Commission staff; provided, that any such oral guidance, comments, requirements or requests are reduced to writing by the Commission and (ii) the Securities Act.

**“Securities Act”** means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

**“Selling Shareholder Questionnaire”** means a questionnaire in the form attached as Annex B hereto, or such other form of questionnaire or information provided by the Purchaser as is reasonably acceptable to the Company from time to time.

**“Shares”** means the shares of Common Stock which may be issued upon exercise of the Pre-Funded Warrants issued to the Purchasers pursuant to the Purchase Agreement.

**“Trading Day”** means a day on which the Principal Market is open for business.

**“Trading Market”** means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, or the New York Stock Exchange (or any successors to any of the foregoing).

## **Section 2 Registration.**

(a) On or prior to the Filing Deadline, the Company shall prepare and file with the Commission a Registration Statement covering the resale of all of the Registrable Securities not then registered on an existing and effective Registration Statement for an offering to be made on a continuous basis pursuant to Rule 415 or, if Rule 415 is not available for offers and sales of the Registrable Securities, by such other means of distribution of Registrable Securities as the Holders may reasonably specify (the **“Initial Registration Statement”**). The Initial Registration Statement shall be on Form S-3 (except if the Company is then ineligible to register for resale the Registrable Securities on Form S-3, in which case such registration shall be on such other form available to register for resale the Registrable Securities as a secondary offering) subject to the provisions of Section 2(d) and shall contain (except if otherwise required pursuant to written comments received from the Commission upon a review of such Registration Statement) the “Plan of Distribution” section substantially in the form attached hereto as Annex A (which may be modified to respond to comments, if any, provided by the Commission). Notwithstanding

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the registration obligations set forth in this Section 2, in the event the Commission informs the Company that all of the Registrable Securities cannot, as a result of the application of Rule 415, be registered for resale as a secondary offering on a single registration statement, the Company agrees to promptly (i) inform each of the Holders thereof and use its commercially reasonable efforts to file amendments to the Initial Registration Statement as required by the Commission and/or (ii) withdraw the Initial Registration Statement and file a new registration statement (a "**New Registration Statement**"), in either case covering the maximum number of Registrable Securities permitted to be registered by the Commission, on Form S-3 or, if the Company is ineligible to register the Registrable Securities on Form S-3, such other form available to register for resale the Registrable Securities as a secondary offering; *provided, however*, that prior to filing such amendment or New Registration Statement, the Company shall be obligated to use its commercially reasonable efforts to advocate with the Commission for the registration of all of the Registrable Securities in accordance with the SEC Guidance, including without limitation, the Securities Act Rules Compliance and Disclosure Interpretations Question 612.09. Notwithstanding any other provision of this Agreement and subject to the payment of liquidated damages in Section 2(c), if any SEC Guidance sets forth a limitation of the number of Registrable Securities permitted to be registered on a particular Registration Statement as a secondary offering (and notwithstanding that the Company used diligent efforts to advocate with the Commission for the registration of all or a greater number of Registrable Securities), unless otherwise directed in writing by a Holder as to its Registrable Securities, the number of Registrable Securities to be registered on such Registration Statement will first be reduced by Registrable Securities not acquired pursuant to the Purchase Agreement (whether pursuant to registration rights or otherwise), and second by Registrable Securities represented by Shares applied to the Holders on a pro rata basis based on the total number of Shares held by such Holders, subject to a determination by the Commission that certain Holders must be reduced first based on the number of Shares held by such Holders. In the event the Company amends the Initial Registration Statement or files a New Registration Statement, as the case may be, under clauses (i) or (ii) above, the Company will use its commercially reasonable efforts to file with the Commission, as promptly as allowed by Commission or SEC Guidance provided to the Company or to registrants of securities in general, one or more registration statements on Form S-3 or such other form available to register for resale those Registrable Securities that were not registered for resale on the Initial Registration Statement, as amended, or the New Registration Statement (the "**Remainder Registration Statements**"). No Holder shall be named as an "underwriter" in any Registration Statement without such Holder's prior written consent.

(b) The Company shall use its commercially reasonable efforts to cause each Registration Statement to be declared effective by the Commission as soon as practicable and, with respect to the Initial Registration Statement or the New Registration Statement, as applicable, no later than the Effectiveness Deadline (including filing with the Commission a request for acceleration of effectiveness in accordance with Rule 461 promulgated under the Securities Act), and shall use its commercially reasonable efforts to keep each Registration Statement continuously effective under the Securities Act until the earlier of (i) such time as all of the Registrable Securities covered by such Registration Statement have been publicly sold by the Holders; (ii) the date that all Registrable Securities covered by such Registration Statement may be sold by non-affiliates without volume or manner-of-sale restrictions pursuant to Rule 144, without the requirement for the Company to be in compliance with the current public information requirement under Rule 144 as determined by counsel to the Company pursuant to a written opinion letter to such effect, addressed and reasonably acceptable to the Company's transfer agent or (iii) the expiration of two years from the Effective Date of such Registration Statement (the "**Effectiveness Period**"). The Company shall request effectiveness of a Registration Statement as of 4:00 P.M. New York City time on a Trading Day. The Company shall promptly notify the Holders via e-mail of the effectiveness of a Registration Statement or any post-effective amendment thereto on the same Trading Day that the Company telephonically confirms effectiveness with the Commission, which date of confirmation shall initially be the date requested for effectiveness of such Registration Statement. The Company shall, by 9:30 A.M. New York City time on the first Trading Day after the Effective Date, file a final Prospectus with the Commission, as required by Rule 424(b) and shall provide the Purchasers with copies of the final Prospectus to be used in connection with the sale or other disposition of the securities covered thereby. The Company shall promptly inform each Holder in writing if, at any time during the Effectiveness Period, the Company does not satisfy the conditions specified in Rule 172 and, as a result thereof, the Holder is required to deliver a Prospectus in connection with any disposition of Registrable Securities.

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(c) If: (i) the Initial Registration Statement is not filed with the Commission on or prior to the Filing Deadline, (ii) the Initial Registration Statement or the New Registration Statement, as applicable, is not declared effective by the Commission (or otherwise does not become effective) for any reason on or prior to the Effectiveness Deadline, (iii) after its Effective Date and except as set forth in the last two sentences of Section 3(h) (A) such Registration Statement ceases for any reason (including, without limitation, by reason of a stop order or the Company's failure to update the Registration Statement), to remain continuously effective as to all Registrable Securities included in such Registration Statement or (B) the Holders are not permitted to utilize the Prospectus therein to resell such Registrable Securities for any reason (other than due to a change in the "Plan of Distribution" the inaccuracy of any information regarding the Holders, or as a result of a breach of this Agreement by a Holder or a Holder's failure to return a Selling Shareholder Questionnaire within the time period provided by Section 2(d) hereof), or (iv) after the Filing Deadline, and only in the event a Registration Statement is not effective or available to sell all Registrable Securities, the Company fails to file with the Commission any required reports under Section 13 or 15(d) of the Exchange Act such that it is not in compliance with Rule 144(c)(1), as a result of which the Holders who are not affiliates are unable to sell Registrable Securities without restriction under Rule 144 (any such failure or breach in clauses (i) through (iv) above being referred to as an "**Event**," and, the date on which such Event occurs, being referred to as an "**Event Date**"), then in addition to any other rights the Holders may have hereunder or under applicable law: (x) within five (5) Business Days after an Event Date relating to a failure in clause (i) or clause (ii) only, the Company shall pay to each Holder an amount in cash, as liquidated damages and not as a penalty, equal to 2.0% of the aggregate purchase price paid by such Holder pursuant to the Purchase Agreement for any Registrable Securities held by such Holder on such Event Date; and (y) on each 30-day anniversary (or pro rata portion thereof) following any Event Date (including, for the avoidance of doubt, a failure in clause (i) or clause (ii), in which case each 30-day anniversary shall be measured commencing on the 31st day following such Event Date) until the earlier of (1) the applicable Event is cured or (2) the Registrable Securities are eligible for resale pursuant to Rule 144 without manner of sale or volume restrictions, the Company shall pay to each Holder an amount in cash, as liquidated damages and not as a penalty, equal to 2.0% of the aggregate purchase price paid by such Holder pursuant to the Purchase Agreement for any unregistered Registrable Securities then held by such Holder. The amounts payable pursuant to the foregoing clauses (x) and (y) are referred to collectively as "**Liquidated Damages**." The parties agree that (1) notwithstanding anything to the contrary herein or in the Purchase Agreement, no Liquidated Damages shall be payable with respect to any period after the expiration of the Effectiveness Period and in no event shall the aggregate amount of Liquidated Damages payable to a Holder exceed, in the aggregate, 10% of the aggregate purchase price paid by such Holder pursuant to the Purchase Agreement and (2) in no event shall the Company be liable in any 30-day period for Liquidated Damages under this Agreement in excess of 2.0% of the aggregate purchase price paid by the Holders pursuant to the Purchase Agreement. If the Company fails to pay any Liquidated Damages pursuant to this Section 2(c) in full within ten (10) Business Days after the date payable, the Company will pay interest thereon at a rate of 2.0% per month (or such lesser maximum amount that is permitted to be paid by applicable law) to the Holder, accruing daily from the date such Liquidated Damages are due until such amounts, plus all such interest thereon, are paid in full. Unless otherwise specified in this Section 2(c), the Liquidated Damages pursuant to the terms hereof shall apply on a daily pro-rata basis for any portion of a month prior to the cure of an Event, except in the case of the first Event Date. Notwithstanding the foregoing, nothing shall preclude any Holder from pursuing or obtaining any available remedies at law, specific performance or other equitable relief with respect to this Section 2(c) in accordance with applicable law. The Company shall not be liable for Liquidated Damages under this Agreement as to any Registrable Securities which are not permitted by the Commission to be included in a Registration Statement due solely to SEC Guidance from the time that it is determined that such Registrable Securities are not permitted to be registered until such time as the provisions of this Agreement as to the Remainder Registration Statements required to be filed hereunder are triggered, in which case the provisions of this Section 2(c) shall once again apply, if applicable. In such case, the Liquidated Damages shall be calculated to only apply to the percentage of Registrable Securities which are permitted in accordance with SEC Guidance to be included in such Registration Statement. The Effectiveness Deadline for a Registration Statement shall be extended without default or Liquidated Damages hereunder in the event that the Company's failure to obtain the effectiveness of the Registration Statement on a timely basis results from the failure of a Holder to timely provide the Company with information requested by the Company and necessary to complete the Registration Statement in accordance with the requirements of the Securities Act;; provided, however, that the failure of such Holder to timely provide such information to the Company shall not affect the rights of the other Holders herein.

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(d) Each Holder agrees to furnish to the Company a completed Selling Shareholder Questionnaire not more than five (5) Trading Days following the date of this Agreement. At least ten (10) Trading Days prior to the first anticipated filing date of a Registration Statement for any registration under this Agreement, the Company will notify each Holder of additional information the Company requires from that Holder in order to comply with the requirements of the Securities Act with respect to the Registration Statement, if any, which shall be completed and delivered to the Company promptly upon request and, in any event, within three (3) Trading Days prior to the applicable anticipated filing date. Each Holder further agrees that it shall not be entitled to be named as a selling securityholder in the Registration Statement or use the Prospectus for offers and resales of Registrable Securities at any time, unless such Holder has returned to the Company a completed Selling Shareholder Questionnaire and responded to any reasonable requests from the Company for further information as described in the previous sentence. If a Holder of Registrable Securities returns a Selling Shareholder Questionnaire or a request for further information, in either case, after its respective deadline, the Company shall use its commercially reasonable efforts to take such actions as are required to name such Holder as a selling security holder in the Registration Statement or any pre-effective or post-effective amendment thereto and to include (to the extent not theretofore included) in the Registration Statement the Registrable Securities identified in such late Selling Shareholder Questionnaire or request for further information. Each Holder acknowledges and agrees that the information in the Selling Shareholder Questionnaire or request for further information as described in this Section 2(d) will be used by the Company in the preparation of the Registration Statement and hereby consents to the inclusion of such information in the Registration Statement, subject to such Holder's right to review the Registration Statement.

(e) In the event that Form S-3 is not available for the registration of the resale of Registrable Securities hereunder, the Company shall (i) register the resale of the Registrable Securities on another appropriate form reasonably acceptable to the Holders and (ii) undertake to register the Registrable Securities on Form S-3 promptly after such form is available, *provided* that the Company shall maintain the effectiveness of the Registration Statement then in effect until such time as a Registration Statement on Form S-3 covering the Registrable Securities has been declared effective by the Commission.

### **Section 3 Registration Procedures**

In connection with the Company's registration obligations hereunder, the Company shall:

(a) Not less than five (5) Trading Days prior to the filing of each Registration Statement and not less than one (1) Trading Day prior to the filing of any related Prospectus or any amendment or supplement thereto (except for Annual Reports on Form 10-K, and Quarterly Reports on Form 10-Q and Current Reports on Form 8-K and any similar or successor reports), (i) furnish to each Holder copies of such Registration Statement, Prospectus or amendment or supplement thereto, as proposed to be filed, which documents will be subject to the review of such Holder (it being acknowledged and agreed that if a Holder does not object to or comment on the aforementioned documents within such five (5) Trading Day or one (1) Trading Day period, as the case may be, then the Holder shall be deemed to have consented to and approved the use of such documents) and (ii) use commercially reasonable efforts to cause its officers and directors, counsel and independent registered public accountants to respond to such inquiries as shall be necessary, in the reasonable opinion of respective counsel to each Holder, to conduct a reasonable investigation within the meaning of the Securities Act. The Company shall not file any Registration Statement or amendment or supplement thereto in a form to which a Holder reasonably objects in good faith, provided that, the Company is notified of such objection in writing within the five (5) Trading Day or one (1) Trading Day period described above, as applicable.

(b) (i) Prepare and file with the Commission such amendments (including post-effective amendments) and supplements, to each Registration Statement and the Prospectus used in connection therewith as may be necessary to keep such Registration Statement continuously effective as to the applicable Registrable Securities for its Effectiveness Period; (ii) cause the related Prospectus to be amended or supplemented by any required Prospectus supplement (subject to the terms of this Agreement), and, as so supplemented or amended, to be filed pursuant to Rule 424; (iii) respond as promptly as reasonably practicable to any comments received from the Commission with respect to each Registration Statement or any amendment thereto and, as promptly as reasonably possible, provide the Holders true and complete copies of all correspondence from and to the Commission relating to such Registration Statement that pertains to the Holders as "Selling Stockholders" but not any comments that would result in the disclosure to the Holders of material and non-public information concerning the Company; and (iv) comply with the provisions of the Securities Act and the Exchange Act with respect to the disposition of all Registrable Securities covered by a Registration Statement until such time as all of such Registrable Securities shall have been disposed of (subject to the terms of this Agreement) in accordance with the intended methods of disposition by the Holders thereof as set forth in such Registration Statement as so amended or in such Prospectus as so supplemented; provided, however, that each Purchaser shall be responsible for the delivery of the Prospectus to the Persons to whom such Purchaser sells any of the Shares (including in accordance with Rule 172 under the Securities Act), and each Purchaser agrees to dispose of Registrable Securities in compliance with the "Plan of Distribution" described in the Registration Statement and otherwise in compliance with applicable federal and state securities laws. In the case of amendments and supplements to a Registration Statement which are required to be filed pursuant to this Agreement (including pursuant to this Section 3(b)) by reason of the Company filing a report on Form 10-K, Form 10-Q or Form 8-K or any analogous report under the Exchange Act, the Company shall have incorporated such report by reference into such Registration Statement, if applicable, or shall file such amendments or supplements with the Commission on the same day on which the Exchange Act report which created the requirement for the Company to amend or supplement such Registration Statement was filed.

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(c) Notify the Holders (which notice shall, pursuant to clauses (iii) through (vi) hereof, be accompanied by an instruction to suspend the use of the Prospectus until the requisite changes have been made) as promptly as reasonably practicable (and, in the case of (i)(A) below, not less than one (1) Trading Day prior to such filing) and (if requested by any such Person) confirm such notice in writing no later than one (1) Trading Day following the day: (i)(A) when a Prospectus or any Prospectus supplement or post-effective amendment to a Registration Statement is proposed to be filed; (B) when the Commission notifies the Company whether there will be a "review" of such Registration Statement and whenever the Commission comments in writing on any Registration Statement (in which case the Company shall provide to each of the Holders true and complete copies of all comments that pertain to the Holders as a "Selling Stockholder" or to the "Plan of Distribution" and all written responses thereto, but not information that the Company believes would constitute material and non-public information); and (C) with respect to each Registration Statement or any post-effective amendment, when the same has become effective; (ii) of any request by the Commission or any other Federal or state governmental authority for amendments or supplements to a Registration Statement or Prospectus or for additional information that pertains to the Holders as "Selling Stockholders" or the "Plan of Distribution"; (iii) of the issuance by the Commission or any other federal or state governmental authority of any stop order suspending the effectiveness of a Registration Statement covering any or all of the Registrable Securities or the initiation of any Proceedings for that purpose; (iv) of the receipt by the Company of any notification with respect to the suspension of the qualification or exemption from qualification of any of the Registrable Securities for sale in any jurisdiction, or the initiation or threatening of any Proceeding for such purpose; (v) of the occurrence of any event or passage of time that makes the financial statements included or incorporated by reference in a Registration Statement ineligible for inclusion or incorporation by reference therein or any statement made in such Registration Statement or Prospectus or any document incorporated or deemed to be incorporated therein by reference untrue in any material respect or that requires any revisions to such Registration Statement, Prospectus or other documents so that, in the case of such Registration Statement or the Prospectus, as the case may be, it will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein (in the case of any Prospectus, form of prospectus or supplement thereto, in light of the circumstances under which they were made), not misleading and (vi) of the negotiation or consummation of a transaction by the Company that is pending or an event that has occurred, which negotiation, consummation or event, the Company's Board of Directors (the "**Board**") reasonably believes, upon the advice of legal counsel, would require additional disclosure by the Company in the Registration Statement of material information that the Company has a bona fide business purpose for preserving as confidential and the non-disclosure of which in the Registration Statement would be expected, in the reasonable determination of the Board, upon the advice of legal counsel, to cause the Registration Statement to fail to comply with applicable disclosure requirements. Any and all such information provided to a Holder pursuant to this Section 3(c) shall remain confidential to each Holder until such information otherwise becomes public, unless disclosure by a Holder is required by law, and, notwithstanding each Holder's agreement to keep such information confidential, the Company shall not provide any material, non-public information to any Holder with respect to such notices and each such Holder makes no acknowledgement that any such information is material, non-public information.

(d) Use commercially reasonable efforts to avoid the issuance of, or, if issued, obtain the withdrawal of (i) any order suspending the effectiveness of a Registration Statement, or (ii) any suspension of the qualification (or exemption from qualification) of any of the Registrable Securities for sale in any jurisdiction, as soon as practicable.

(e) If requested by a Holder, furnish to such Holder, without charge, one conformed copy of each Registration Statement and each amendment thereto and all exhibits to the extent requested by such Person (including those previously furnished or incorporated by reference) promptly after the filing of such documents with the Commission; *provided*, that the Company shall have no obligation to provide any document pursuant to this clause that is available on the Commission's EDGAR system.

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(f) Prior to any resale of Registrable Securities by a Holder, use its commercially reasonable efforts to register or qualify or cooperate with the selling Holders in connection with the registration or qualification (or exemption from the registration or qualification) of such Registrable Securities for the resale by the Holder under the securities or "blue sky" laws of such jurisdictions within the United States as any Holder reasonably requests in writing, to keep each registration or qualification (or exemption therefrom) effective during the Effectiveness Period and to do any and all other acts or things reasonably necessary to enable the disposition in such jurisdictions of the Registrable Securities covered by each Registration Statement; *provided*, that the Company shall not be required to qualify generally to do business in any jurisdiction where it is not then so qualified, subject the Company to any material tax in any such jurisdiction where it is not then so subject or file a general consent to service of process in any such jurisdiction.

(g) Cooperate with such Holder to facilitate the timely preparation and delivery of certificates or book entry statements, as applicable, representing Registrable Securities to be delivered to a transferee pursuant to the Registration Statement, which certificates or statements shall be free, to the extent permitted by the Purchase Agreement and under law, of all restrictive legends.

(h) Following the occurrence of any event contemplated by Section 3(c), as promptly as reasonably practicable (taking into account the Company's good faith assessment of any adverse consequences to the Company and its shareholders of the premature disclosure of such event), prepare a supplement or amendment, including a post-effective amendment, to the affected Registration Statements or a supplement to the related Prospectus or any document incorporated or deemed to be incorporated therein by reference, and file any other required document so that, as thereafter delivered, no Registration Statement nor any Prospectus will contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein (in the case of any Prospectus, form of prospectus or supplement thereto, in light of the circumstances under which they were made), not misleading. If the Company notifies the Holders in accordance with clauses (iii) through (vi) of Section 3(c) above to suspend the use of any Prospectus until the requisite changes to such Prospectus have been made, then the Holders shall suspend use of such Prospectus. The Company will use its commercially reasonable efforts to ensure that the use of the Prospectus may be resumed as promptly as is practicable. The Company shall be entitled to exercise its right under this Section 3(h) to suspend the availability of a Registration Statement and Prospectus for a period not to exceed 60 calendar days (which need not be consecutive days) in any 12-month period without incurring liability for Liquidated Damages otherwise required pursuant to Section 2(c). For the avoidance of doubt, the Company's rights under this Section 3(h) shall include suspensions of availability arising from the filing of a post-effective amendment to a Registration Statement to update the Prospectus therein to include the information contained in the Company's Annual Report on Form 10-K, which suspensions may extend for the amount of time reasonably required to respond to any comments of the staff of the Commission on such amendment.

(i) The Company may require each selling Holder to furnish to the Company a statement as to (i) the number of shares of Common Stock beneficially owned by such Holder and any Affiliate thereof, (ii) any Financial Industry Regulatory Authority ("*FINRA*") affiliations, (iii) any natural persons who have the power to vote or dispose of the Common Stock and (iv) any other information as may be requested by the Commission, FINRA or any state securities commission. During any periods that the Company is unable to meet its obligations hereunder with respect to the registration of Registrable Securities because any Holder fails to furnish such information within three (3) Trading Days of the Company's request, any Liquidated Damages that are accruing at such time as to such Holder only shall be tolled and any Event that may otherwise occur solely because of such delay shall be suspended as to such Holder only, until such information is delivered to the Company; provided, however, if the failure of the Holder to furnish the required information results in the occurrence of an Event under Section 2(c), any Liquidated Damages that are accruing at such time shall be tolled and any such Event that occurs as a result thereof shall be suspended until such time as the Holder furnishes such information.

(j) The Company shall cooperate with any registered broker through which a Holder proposes to resell its Registrable Securities in effecting a filing with FINRA pursuant to FINRA Rule 5110 as requested by any such Holder and the Company shall pay the filing fee required for the first such filing within two (2) Business Days of the request therefor.

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**Section 4 Registration Expenses.** All fees and expenses incident to the Company's performance of or compliance with its obligations under this Agreement (excluding any underwriting discounts and selling commissions and all legal fees and expenses of legal counsel for any Holder) shall be borne by the Company whether or not any Registrable Securities are sold pursuant to a Registration Statement. The fees and expenses referred to in the foregoing sentence shall include, without limitation, (i) all registration and filing fees (including, without limitation, fees and expenses (A) with respect to filings required to be made with any Trading Market on which the Common Stock are then listed for trading, (B) with respect to compliance with applicable state securities or "blue sky" laws (including, without limitation, fees and disbursements of counsel for the Company in connection with "blue sky" qualifications or exemptions of the Registrable Securities and determination of the eligibility of the Registrable Securities for investment under the laws of such jurisdictions as requested by the Holders) and (C) if not previously paid by the Company in connection with Section 3(j) above, with respect to any filing that may be required to be made by any broker through which a Holder intends to make sales of Registrable Securities with FINRA pursuant to the FINRA Rule 5110, so long as the broker is receiving no more than a customary brokerage commission in connection with such sale), (ii) printing expenses (including, without limitation, expenses of printing certificates for Registrable Securities and of printing prospectuses if the printing of prospectuses is reasonably requested by the Holders of a majority of the Registrable Securities included in the Registration Statement), (iii) messenger, telephone and delivery expenses, (iv) fees and disbursements of counsel for the Company, (v) Securities Act liability insurance, if the Company so desires such insurance, and (vi) fees and expenses of all other Persons retained by the Company in connection with the consummation of the transactions contemplated by this Agreement. In addition, the Company shall be responsible for all of its internal expenses incurred in connection with the consummation of the transactions contemplated by this Agreement (including, without limitation, all salaries and expenses of its officers and employees performing legal or accounting duties), the expense of any annual audit and the fees and expenses incurred in connection with the listing of the Registrable Securities on any securities exchange as required hereunder. In no event shall the Company be responsible for any underwriting, broker or similar fees or commissions of any Holder or, except to the extent provided for in the Transaction Documents, any legal fees or other costs of the Holders.

**Section 5 Indemnification.**

(a) Indemnification by the Company. The Company shall, notwithstanding any termination of this Agreement, indemnify, defend and hold harmless each Holder, the officers, directors, agents, partners, members, managers, stockholders, Affiliates, investment advisers and employees (and any other Persons with a functionally equivalent role of a Person holding such titles notwithstanding a lack of such title or any other title) of each of them, each Person who controls any such Holder (within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act) and the officers, directors, partners, members, managers, stockholders, agents, investment advisers and employees (and any other Persons with a functionally equivalent role of a Person holding such titles notwithstanding a lack of such title or any other title) of each such controlling Person, to the fullest extent permitted by applicable law, from and against any and all losses, claims, damages, liabilities, costs (including, without limitation, reasonable costs of preparation and investigation and reasonable attorneys' fees) and expenses (collectively, "**Losses**"), as incurred, that arise out of or are based upon (i) any untrue or alleged untrue statement of a material fact contained in any Registration Statement, any Prospectus or any form of prospectus or in any amendment or supplement thereto or in any preliminary prospectus, or arising out of or relating to any omission or alleged omission to state a material fact required to be stated therein or necessary to make the statements therein (in the case of any Prospectus or form of prospectus or supplement thereto, in light of the circumstances under which they were made) not misleading, or (ii) any violation or alleged violation by the Company of the Securities Act, the Exchange Act or any state securities law or any rule or regulation thereunder, in connection with the performance of its obligations under this Agreement, except to the extent, but only to the extent, that (A) such untrue statements, alleged untrue statements, omissions or alleged omissions are based solely upon information regarding such Holder furnished in writing to the Company by such Holder expressly for use therein, or to the extent that such information relates to such Holder or such Holder's proposed method of distribution of Registrable Securities and was reviewed and approved in writing by such Holder expressly for use in the Registration Statement, such Prospectus or such

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form of Prospectus or in any amendment or supplement thereto (it being understood that each Holder has approved Annex A hereto for this purpose) or (B) in the case of an occurrence of an event of the type specified in Section 3(c)(iii)-(vi), related to the use by a Holder of an outdated or defective Prospectus after the Company has notified such Holder in writing that the Prospectus is outdated or defective and prior to the receipt by such Holder of the Advice contemplated and defined in Section 6(d) below, to the extent that following the receipt of the Advice the misstatement or omission giving rise to such Loss would have been corrected or (C) to the extent that any such Losses arise out of the Purchaser's (or any other indemnified Person's) failure to send or give a copy of the Prospectus or supplement (as then amended or supplemented), if required, pursuant to Rule 172 under the Securities Act (or any successor rule) to the Persons asserting an untrue statement or alleged untrue statement or alleged untrue statement or omission or alleged omission at or prior to the written confirmation of the sale of Registrable Securities to such Person if such statement or omission was corrected in such Prospectus or supplement. The Company shall notify the Holders promptly of the institution, threat or assertion of any Proceeding arising from or in connection with the transactions contemplated by this Agreement of which the Company is aware. Such indemnity shall remain in full force and effect regardless of any investigation made by or on behalf of an Indemnified Party (as defined in Section 5(c)) and shall survive the transfer of the Registrable Securities by the Holders.

(b) Indemnification by Holders. Each Holder shall, severally and not jointly, indemnify and hold harmless the Company, its directors, officers, agents and employees, each Person who controls the Company (within the meaning of Section 15 of the Securities Act and Section 20 of the Exchange Act), and the directors, officers, agents or employees of such controlling Persons, to the fullest extent permitted by applicable law, from and against all Losses, as incurred, arising out of or are based solely upon any untrue or alleged untrue statement of a material fact contained in any Registration Statement, any Prospectus, or any form of prospectus, or in any amendment or supplement thereto or in any preliminary prospectus, or arising out of or relating to any omission or alleged omission of a material fact required to be stated therein or necessary to make the statements therein (in the case of any Prospectus, or any form of prospectus or supplement thereto, in light of the circumstances under which they were made) not misleading (i) to the extent that such untrue statements or omissions are based solely upon information regarding such Holder furnished in writing to the Company by such Holder expressly for use therein or (ii) to the extent that such information relates to such Holder or such Holder's proposed method of distribution of Registrable Securities and was reviewed and approved in writing by such Holder expressly for use in a Registration Statement (it being understood that the Holder has approved Annex A hereto for this purpose), such Prospectus or such form of Prospectus or in any amendment or supplement thereto or (iii) in the case of an occurrence of an event of the type specified in Section 3(c)(iii)-(vi), to the extent related to the use by such Holder of an outdated or defective Prospectus after the Company has notified such Holder in writing that the Prospectus is outdated or defective and prior to the receipt by such Holder of the Advice contemplated in Section 6(d). In no event shall the liability of any selling Holder hereunder be greater in amount than the dollar amount of the net proceeds received by such Holder upon the sale of the Registrable Securities giving rise to such indemnification obligation.

(c) Conduct of Indemnification Proceedings. If any Proceeding shall be brought or asserted against any Person entitled to indemnity hereunder (an "Indemnified Party"), such Indemnified Party shall promptly notify the Person from whom indemnity is sought (the "Indemnifying Party") in writing, and the Indemnifying Party shall have the right to assume the defense thereof, including the employment of counsel reasonably satisfactory to the Indemnified Party and the payment of all reasonable fees and expenses incurred in connection with defense thereof; *provided*, that the failure of any Indemnified Party to give such notice shall not relieve the Indemnifying Party of its obligations or liabilities pursuant to this Agreement, except (and only) to the extent that it shall be finally determined by a court of competent jurisdiction (which determination is not subject to appeal or further review) that such failure shall have materially and adversely prejudiced the Indemnifying Party.

An Indemnified Party shall have the right to employ separate counsel in any such Proceeding and to participate in the defense thereof, but the fees and expenses of such counsel shall be at the expense of such Indemnified Party or Indemnified Parties unless: (1) the Indemnifying Party has agreed in writing to pay such fees and expenses; (2) the Indemnifying Party shall have failed promptly to assume the defense of such Proceeding and to employ counsel reasonably satisfactory to such Indemnified Party in any such Proceeding; or (3) the named parties to any such Proceeding (including any impleaded parties) include both such Indemnified Party and the Indemnifying Party, and such Indemnified Party shall have been advised by counsel that a conflict of interest exists if the same counsel were to represent such Indemnified Party and the Indemnifying Party (in which case, if such Indemnified Party notifies the Indemnifying Party in writing that it elects to employ separate counsel at the expense

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of the Indemnifying Party, the Indemnifying Party shall not have the right to assume the defense thereof and such counsel shall be at the expense of the Indemnifying Party); *provided*, that the Indemnifying Party shall not be liable for the fees and expenses of more than one separate firm of attorneys at any time for all Indemnified Parties. The Indemnifying Party shall not be liable for any settlement of any such Proceeding effected without its written consent, which consent shall not be unreasonably withheld, delayed or conditioned. No Indemnifying Party shall, without the prior written consent of the Indemnified Party, effect any settlement of any pending Proceeding in respect of which any Indemnified Party is a party, unless such settlement includes an unconditional release of such Indemnified Party from all liability on claims that are the subject matter of such Proceeding.

Subject to the terms of this Agreement, all fees and expenses of the Indemnified Party (including reasonable fees and expenses to the extent incurred in connection with investigating or preparing to defend such Proceeding in a manner not inconsistent with this Section 5) shall be paid to the Indemnified Party, as incurred, within twenty (20) Trading Days of written notice thereof to the Indemnifying Party; *provided*, that the Indemnified Party shall promptly reimburse the Indemnifying Party for that portion of such fees and expenses applicable to such actions for which such Indemnified Party is finally judicially determined to not be entitled to indemnification hereunder. The failure to deliver written notice to the Indemnifying Party within a reasonable time of the commencement of any such action shall not relieve such Indemnifying Party of any liability to the Indemnified Party under this Section 5, except to the extent that the Indemnifying Party is materially and adversely prejudiced in its ability to defend such action.

(d) Contribution. If a claim for indemnification under Section 5(a) or 5(b) is unavailable to an Indemnified Party or insufficient to hold an Indemnified Party harmless for any Losses, then each Indemnifying Party, in lieu of indemnifying such Indemnified Party, shall contribute to the amount paid or payable by such Indemnified Party as a result of such Losses, in such proportion as is appropriate to reflect the relative fault of the Indemnifying Party and Indemnified Party in connection with the actions, statements or omissions that resulted in such Losses as well as any other relevant equitable considerations. The relative fault of such Indemnifying Party and Indemnified Party shall be determined by reference to, among other things, whether any action in question, including any untrue or alleged untrue statement of a material fact or omission or alleged omission of a material fact, has been taken or made by, or relates to information supplied by, such Indemnifying Party or Indemnified Party, and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such action, statement or omission. The amount paid or payable by a party as a result of any Losses shall be deemed to include, subject to the limitations set forth in this Agreement, any reasonable attorneys' or other reasonable fees or expenses incurred by such party in connection with any Proceeding to the extent such party would have been indemnified for such fees or expenses if the indemnification provided for in this Section 5 was available to such party in accordance with its terms.

The parties hereto agree that it would not be just and equitable if contribution pursuant to this Section 5(d) were determined by pro rata allocation or by any other method of allocation that does not take into account the equitable considerations referred to in the immediately preceding paragraph. Notwithstanding the provisions of this Section 5(d), (A) no Holder shall be required to contribute, in the aggregate, any amount in excess of the amount by which the net proceeds actually received by such Holder from the sale of the Registrable Securities subject to the Proceeding exceeds the amount of any damages that such Holder has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission and (B) no contribution will be made under circumstances where the maker of such contribution would not have been required to indemnify the Indemnified Party under the fault standards set forth in this Section 5. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any Person who was not guilty of such fraudulent misrepresentation.

The indemnity and contribution agreements contained in this Section 5 are in addition to any liability that the Indemnifying Parties may have to the Indemnified Parties and are not in diminution or limitation of the indemnification provisions under the Purchase Agreement.

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## Section 6 Miscellaneous.

(a) Remedies. In the event of a breach by the Company or by a Holder of any of their obligations under this Agreement, each Holder or the Company, as the case may be, in addition to being entitled to exercise all rights granted by law and under this Agreement, including recovery of damages, will be entitled to specific performance of its rights under this Agreement. The Company and each Holder agree that monetary damages would not provide adequate compensation for any losses incurred by reason of a breach by it of any of the provisions of this Agreement and hereby further agrees that, in the event of any action for specific performance in respect of such breach, it shall waive the defense that a remedy at law would be adequate.

(b) No Piggyback on Registrations; Prohibition on Filing Other Registration Statements. Except and to the extent specified in the Purchase Agreement, neither the Company nor any of its security holders (other than the Holders in such capacity pursuant hereto) may include securities of the Company in a Registration Statement other than the Registrable Securities and the Company shall not prior to the Effective Date enter into any agreement providing any such right to any of its security holders. For the avoidance of doubt, the provisions of this Agreement shall not impact the terms of any lock-up agreement entered into by Purchaser for the benefit of the Company on or about the date hereof.

(c) Compliance. Each Holder covenants and agrees that it will comply with the prospectus delivery requirements of the Securities Act as applicable to it (unless an exemption therefrom is available) in connection with sales of Registrable Securities pursuant to the Registration Statement and shall sell the Registrable Securities only in accordance with a method of distribution described in the Registration Statement.

(d) Discontinued Disposition. By its acquisition of Registrable Securities, each Holder agrees that, upon receipt of a notice from the Company of the occurrence of any event of the kind described in Section 3(e)(iii)-(vi), such Holder will forthwith discontinue disposition of such Registrable Securities under a Registration Statement until it is advised in writing (the "Advice") by the Company that the use of the applicable Prospectus (as it may have been supplemented or amended) may be resumed. The Company will use its commercially reasonable efforts to ensure that the use of the Prospectus may be resumed as promptly as is practicable.

(e) No Inconsistent Agreements. Neither the Company nor any of its subsidiaries has entered, as of the date hereof, nor shall the Company or any of its subsidiaries, on or after the date hereof, enter into any agreement with respect to its securities, that would have the effect of impairing the rights granted to the Holders in this Agreement or otherwise conflicts with the provisions hereof.

(f) Amendments and Waivers. The provisions of this Agreement, including the provisions of this sentence, may not be amended, modified or supplemented, or waived unless the same shall be in writing and signed by the Company and Holders holding at least a majority of the then outstanding Registrable Securities, provided that any party may give a waiver as to itself. Notwithstanding the foregoing, a waiver or consent to depart from the provisions hereof with respect to a matter that relates exclusively to the rights of Holders and that does not directly or indirectly affect the rights of other Holders may be given by Holders of all of the Registrable Securities to which such waiver or consent relates; provided, however, that the provisions of this sentence may not be amended, modified, or supplemented except in accordance with the provisions of the immediately preceding sentence.

(g) Notices. Any and all notices or other communications or deliveries required or permitted to be provided hereunder shall be delivered as set forth in the Purchase Agreement.

(h) Successors and Assigns. This Agreement shall inure to the benefit of and be binding upon the successors and permitted assigns of each of the parties and shall inure to the benefit of each Holder. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and assigns any rights, remedies, obligations, or liabilities under or by reason of this Agreement, except as expressly provided in this Agreement. The Company may not assign its rights (except by merger or in connection with another entity acquiring all or substantially all of the Company's assets) or obligations hereunder without the prior written consent of all the Holders of the then outstanding Registrable Securities. Each Holder may assign its respective rights hereunder in the manner and to the Persons as permitted under the Purchase Agreement; provided in each case that (i) the Holder agrees in writing with the transferee or assignee to assign such rights and related obligations under this Agreement, and for the transferee or assignee to assume such obligations, and a copy of such agreement is furnished to the Company within a reasonable time after such assignment, (ii) the Company is, within a reasonable time after such transfer or assignment, furnished with written notice of the name and address of such transferee or assignee and the securities with respect to which such registration rights are being transferred or assigned, (iii) at or before the time the Company received the written notice contemplated by clause (ii) of this sentence, the transferee or assignee agrees in writing with the Company to be bound by all of the provisions contained herein and (iv) the transferee is an "accredited investor," as that term is defined in Rule 501 of Regulation D.

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(i) Execution and Counterparts. This Agreement may be executed in two or more counterparts, each of which when so executed shall be deemed to be an original and, all of which taken together shall constitute one and the same Agreement and shall become effective when counterparts have been signed by each party and delivered to the other party, it being understood that both parties need not sign the same counterpart. Counterparts may be delivered via facsimile, electronic mail (including any electronic signature covered by the U.S. federal ESIGN Act of 2000, Uniform Electronic Transactions Act, the Electronic Signatures and Records Act or other applicable law, e.g., www.docusign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

(j) Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Agreement shall be determined in accordance with the provisions of the Purchase Agreement. To the extent that the Company has or hereafter may acquire any immunity (on the grounds of sovereignty or otherwise) from the jurisdiction of any court or from any legal process with respect to itself or its property, the Company irrevocably waives, to the fullest extent permitted by law, such immunity in respect of any such suit, action or proceeding. **EACH PARTY HERETO HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL PROCEEDING ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY.**

(k) Cumulative Remedies. The remedies provided herein are cumulative and not exclusive of any other remedies provided by law.

(l) Severability. If any term, provision, covenant or restriction of this Agreement is held by a court of competent jurisdiction to be invalid, illegal, void or unenforceable, the remainder of the terms, provisions, covenants and restrictions set forth herein shall remain in full force and effect and shall in no way be affected, impaired or invalidated, and the parties hereto shall use their good faith reasonable efforts to find and employ an alternative means to achieve the same or substantially the same result as that contemplated by such term, provision, covenant or restriction. It is hereby stipulated and declared to be the intention of the parties that they would have executed the remaining terms, provisions, covenants and restrictions without including any of such that may be hereafter declared invalid, illegal, void or unenforceable.

(m) Headings. The headings in this Agreement are for convenience only and shall not limit or otherwise affect the meaning hereof.

(n) Independent Nature of Purchasers' Obligations and Rights. The obligations of each Purchaser under this Agreement are several and not joint with the obligations of any other Purchaser hereunder, and no Purchaser shall be responsible in any way for the performance of the obligations of any other Purchaser hereunder. Nothing contained herein or in any other agreement or document delivered in connection herewith, and no action taken by any Purchaser pursuant hereto or thereto, shall be deemed to constitute the Purchasers as a partnership, an association, a joint venture or any other kind of entity, or create a presumption that the Purchasers are in any way acting in concert with respect to such obligations or the transactions contemplated by this Agreement. Each Purchaser acknowledges that no other Purchaser has acted as agent for such Purchaser in connection with making its investment hereunder and that no Purchaser will be acting as agent of such Purchaser in connection with monitoring its investment in the securities or enforcing its rights under the Transaction Documents. Each Purchaser shall be entitled to protect and enforce its rights, including, without limitation, the rights arising out of this Agreement, and it shall not be necessary for any other Purchaser to be joined as an additional party in any Proceeding for such purpose. The Company acknowledges that each of the Purchasers has been provided with the same Registration Rights Agreement for the purpose of closing a transaction with multiple Purchasers and not because it was required or requested to do so by any Purchaser.

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IN WITNESS WHEREOF, the parties have executed this Registration Rights Agreement as of the date first written above.

**MONOPAR THERAPEUTICS INC.**

By: \_\_\_\_\_

Name:

Title:

[Signature Page to Registration Rights Agreement]

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IN WITNESS WHEREOF, the parties have executed this Registration Rights Agreement as of the date first written above.

NAME OF INVESTING ENTITY

By: \_\_\_\_\_

Name:

Title:

ADDRESSEE FOR NOTICE

[Signature Page to Registration Rights Agreement]