

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 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): August 10, 2023

Ocuphire Pharma, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of incorporation or
organization)

001-34079
(Commission File Number)

11-3516358
(I.R.S. Employer Identification No.)

3700 Grand River Avenue, Suite 120 Farmington Hills, MI 48335

(Address of principal executive offices and zip code)

248-957-9024
(Registrant's telephone number including area code)

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

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))

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

Title of Each Class	Trading Symbol	Name of Exchange on Which Registered
Common Stock, par value \$0.0001 per share	OCUP	The Nasdaq Stock Market LLC

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.

On August 10, 2023, Ocuphire Pharma, Inc. (the “Company”) entered into a common stock purchase agreement (the “Purchase Agreement”) with Lincoln Park Capital Fund, LLC (“Lincoln Park”), which provides that, upon the terms and subject to the conditions and limitations set forth therein, the Company has the right, but not the obligation, to sell to Lincoln Park up to \$50,000,000 of shares of the Company’s common stock (the “Purchase Shares”) from time to time over the 30-month term of the Purchase Agreement. Concurrently with entering into the Purchase Agreement, the Company also entered into a registration rights agreement with Lincoln Park (the “Registration Rights Agreement”) pursuant to which the Company agreed to register the sale of the shares of the Company’s common stock that have been and may be issued to Lincoln Park under the Purchase Agreement pursuant to the Company’s existing shelf registration statement on Form S-3 (File No. 333-252715) (the “Registration Statement”) or a new registration statement. Upon the execution of the Purchase Agreement, the Company issued 246,792 shares of common stock (the “Commitment Shares”) to Lincoln Park and paid Lincoln Park \$40,000, which together represents the fee for Lincoln Park’s commitment to purchase shares of the Company’s common stock under the Purchase Agreement. Lincoln Park has agreed not to cause or engage, in any manner whatsoever, any direct or indirect short selling or hedging of the Company’s common stock.

After the Commencement Date (as defined below), on any business day selected by the Company, the Company may direct Lincoln Park to purchase up to 50,000 shares of its common stock on such business day (or the purchase date) (a “Regular Purchase”), provided that the closing sale price of the Company’s common stock on the Nasdaq Stock Market (“Nasdaq”) on the applicable purchase date is not below \$0.25 and subject to other adjustments. A Regular Purchase may be increased to up to (i) 60,000 shares if the closing sale price of the Company’s common stock on Nasdaq is not below \$5.00 on the applicable purchase date and (ii) 70,000 shares if the closing sale price of the Company’s common stock on Nasdaq is not below \$7.50 on the applicable purchase date. The Company may direct Lincoln Park to purchase shares in Regular Purchases as often as every business day.

The purchase price per share for each such Regular Purchase will be equal to the lesser of:

- the lowest sale price for the Company’s common stock on Nasdaq on the purchase date of such shares; and
- the average of the three (3) lowest closing sale prices for the Company’s common stock on Nasdaq during the ten (10) consecutive business days prior to the purchase date of such shares.

In addition, the Company may also direct Lincoln Park, on any business day on which the Company has submitted a Regular Purchase notice for the maximum amount allowed for such Regular Purchase, to purchase an additional amount of the Company’s common stock (an “Accelerated Purchase”) of up to the lesser of:

- three (3) times the number of shares purchased pursuant to such Regular Purchase; and
- 30% of the aggregate shares of the Company’s common stock traded on Nasdaq during all or, if certain trading volume or market price thresholds specified in the Purchase Agreement are crossed on the applicable Accelerated Purchase date, the portion of the normal trading hours on the applicable Accelerated Purchase date prior to such time that any one of such thresholds is crossed (the “Accelerated Purchase Measurement Period”).

The purchase price per share for each such Accelerated Purchase will be equal to 96.5% of the lower of:

- the closing sale price of the Company’s common stock on Nasdaq on the applicable Accelerated Purchase date; and
- the volume-weighted average price of the Company’s common stock on Nasdaq during the applicable Accelerated Purchase Measurement Period on the applicable Accelerated Purchase date.

The Company may also direct Lincoln Park, on any business day on which an Accelerated Purchase has been completed and all of the shares to be purchased thereunder have been delivered to Lincoln Park in accordance with the Purchase Agreement, to purchase an additional amount of the Company’s common stock (an “Additional Accelerated Purchase”) as described in the Purchase Agreement.

In the case of Regular Purchases, Accelerated Purchases and Additional Accelerated Purchases, the purchase price per share will be equitably adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction occurring during the business days used to compute the purchase price.

The Purchase Agreement prohibits the Company from directing Lincoln Park to purchase any shares of common stock if those shares, when aggregated with all other shares of Common Stock then beneficially owned by Lincoln Park (as calculated pursuant to Section 13(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and Rule 13d-3 thereunder), would result in Lincoln Park beneficially owning more than 9.99% of the then total outstanding shares of common stock.

Under applicable listing rules of The Nasdaq Capital Market ("Nasdaq"), the Company is prohibited from issuing to Lincoln Park more than 4,195,058 shares of Common Stock under the Purchase Agreement (the "Exchange Cap"), including Purchase Shares and Commitment Shares, such maximum number of shares representing 19.99% of the outstanding shares of the Company's Common Stock immediately prior to execution of the Purchase Agreement, unless (i) the Company first obtains stockholder approval in accordance with applicable Nasdaq listing rules to issue shares in excess of the Exchange Cap to Lincoln Park under the Purchase Agreement or (ii) the average price paid by Lincoln Park for all shares of Common Stock issued by the Company under the Purchase Agreement is equal to or greater than \$4.399 (which represents the lower of (A) the official closing price of the Company's Common Stock on Nasdaq on the date of the Purchase Agreement and (B) the average official closing price of the Company's Common Stock on Nasdaq for the five consecutive trading days ending on the date of the Purchase Agreement, as adjusted to take into account the issuance of the Commitment Shares to Lincoln Park for non-cash consideration), such that the Exchange Cap will not apply under applicable Nasdaq listing rules to limit issuances and sales of Common Stock to Lincoln Park pursuant to the Purchase Agreement. In any event, the Purchase Agreement specifically provides that we are not required or permitted to issue, and Lincoln Park is not required to purchase, any shares of Common Stock under the Purchase Agreement if the issuance would violate the rules or regulations of Nasdaq.

The Purchase Agreement contains customary representations, warranties, covenants, closing conditions and indemnification and termination provisions. Sales under the Purchase Agreement may commence only after certain conditions have been satisfied, the date on which all requisite conditions have been satisfied (the "Commencement Date"), which conditions include the delivery to Lincoln Park of a prospectus supplement covering the shares of the Company's common stock issued or sold by the Company to Lincoln Park under the Purchase Agreement, the issuance of the Commitment Shares to Lincoln Park under the Purchase Agreement, and the receipt by Lincoln Park of a customary opinion of counsel and other certificates and closing documents.

The Purchase Agreement may be terminated by the Company at any time, for any reason and without any payment or liability to the Company, by giving notice to Lincoln Park to terminate the Purchase Agreement with effect one business day after the notice has been received by Lincoln Park. The Company may deliver purchase notices under the Purchase Agreement, subject to market conditions, and in light of the Company's capital needs, from time to time and under the limitations contained in the Purchase Agreement. Any proceeds that the Company receives under the Purchase Agreement are expected to be used for working capital and general corporate purposes.

The issuance of the Purchase Shares and Commitment Shares is being made pursuant to the Company's Registration Statement, and the Company's prospectus supplement relating to this transaction, which is expected to be filed with the SEC on August 11, 2023, that forms part of the Registration Statement. A copy of the legal opinion as to the validity of the shares of the Company's common stock subject to the Purchase Agreement is filed as Exhibit 5.1 attached hereto.

The foregoing is a summary description of certain terms of the Purchase Agreement and the Registration Rights Agreement and, by its nature, is incomplete. Copies of the Purchase Agreement and the Registration Rights Agreement are filed as Exhibits 10.1 and 10.2 attached hereto. The foregoing descriptions of the Purchase Agreement and the Registration Rights Agreement are qualified in their entirety by reference to such exhibits.

The Purchase Agreement and Registration Rights Agreement contain customary representations and warranties, covenants and indemnification provisions that the parties made to, and solely for the benefit of, each other in the context of all of the terms and conditions of such agreements and in the context of the specific relationship between the parties thereto. The provisions of the Purchase Agreement and Registration Rights Agreement, including any representations and warranties contained therein, are not for the benefit of any party other than the parties thereto and are not intended as documents for investors and the public to obtain factual information about the current state of affairs of the parties thereto. Rather, investors and the public should look to other disclosures contained in the Company's annual, quarterly and current reports the Company may file with the Securities and Exchange Commission.

The information contained in this Current Report on Form 8-K shall not constitute an offer to sell or the solicitation of an offer to buy the shares of the Company's common stock discussed herein, nor shall there be any offer, solicitation or sale of the shares in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such jurisdiction.

Item 2.02 Results of Operations and Financial Condition.

On August 11, the Company issued a press release announcing its financial results for the quarter ended June 30, 2023. A copy of this press release is furnished herewith as Exhibit 99.1 to this Current Report on Form 8-K and is incorporated herein by reference.

In accordance with General Instruction B.2. of Form 8-K, the information in this Item 2.02, and Exhibit 99.1 hereto, shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liability of that section, nor shall it be deemed incorporated by reference in any of the Company's filings under the Securities Act of 1933, as amended, or the Exchange Act, whether made before or after the date hereof, regardless of any incorporation language in such a filing, except as expressly set forth by specific reference in such a filing.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

Exhibit No.	Document
5.1	Opinion of Honigman LLP
10.1	Purchase Agreement, dated as of August 10, 2023, by and between Ocuphire Pharma, Inc. and Lincoln Park Capital Fund, LLC
10.2	Registration Rights Agreement, dated as of August 10, 2023, by and between Ocuphire Pharma, Inc. and Lincoln Park Capital Fund, LLC
23.1	Consent of Honigman LLP (contained in Exhibit 5.1)
99.1	Press Release, dated August 11, 2023
104	The cover page from this Current Report on Form 8-K, formatted in Inline XBRL

SIGNATURES

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

OCUPHIRE PHARMA, INC.

By: /s/ Richard J. Rodgers

Richard J. Rodgers

Interim President and Chief Executive Officer

Date: August 11, 2023



August 11, 2023

Ocuphire Pharma, Inc.
37000 Grand River Avenue, Suite 120
Farmington Hills, Michigan 48335

Re: Securities Registered under Registration Statement on Form S-3

Ladies and Gentlemen:

We have acted as counsel to Ocuphire Pharma, Inc., a Delaware corporation (the “**Company**”), in connection with preparing and filing with the Securities and Exchange Commission (the “**Commission**”) pursuant to the Securities Act of 1933, as amended (the “**Securities Act**”), (i) a Registration Statement on Form S-3 (File No. 333-252715) (the “**Registration Statement**”) filed on February 4, 2021, and as amended on February 11, 2021, and declared effective by the Commission on February 12, 2021, (ii) the base prospectus included in the Registration Statement (the “**Base Prospectus**”) and (iii) the prospectus supplement (the “**Prospectus Supplement**,” and together with the Base Prospectus, the “**Prospectus**”) filed on August 11, 2023 by the Company with the Commission pursuant to Rule 424 under the Securities Act. The Prospectus relates to the resale from time to time by the selling stockholder of (i) 246,792 shares of the Company’s common stock, par value \$0.0001, of the Company (the “**Common Stock**”) and (ii) subject to certain conditions, additional shares of Common Stock having an aggregate gross purchase price up to \$50,000,000 from time to time (together, the “**Shares**”). The Shares are being sold by the Company to Lincoln Park Capital Fund, LLC (the “**Purchaser**”) pursuant to a Purchase Agreement dated as of August 10, 2023 between the Company and the Purchaser (the “**Purchase Agreement**”) and resold by the Purchaser pursuant to the Registration Statement and Prospectus filed pursuant to the Registration Rights Agreement, dated as of August 10, 2023, by and between the Company and the Purchaser (the “**Registration Rights Agreement**”).

For the purpose of rendering this opinion, we examined originals or copies of such documents as we deemed relevant. In conducting our examination, we assumed, without investigation, the genuineness of all signatures, the correctness of all certificates, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted as copies, and the authenticity of the originals of such copies, and the accuracy and completeness of all records made available to us by the Company.

For the purposes of our opinion set forth below, we have assumed (i) approval by the Company’s board of directors (or a duly authorized committee thereof) of each issuance of Shares, (ii) that the Shares are issued for a price per share equal to or greater than the minimum price, if any, authorized by the Company’s board of directors (or a duly authorized committee thereof) prior to the date of issuance (the “**Minimum Price**”) (iii) that the Shares will be properly delivered to the Purchaser pursuant to the Purchase Agreement and the Delaware General Corporation Law. With respect to the Shares, we express no opinion to the extent that, notwithstanding the Company’s current reservation of the Purchase Shares, future issuances of securities of the Company, including the Shares, and/or antidilution adjustments to outstanding securities of the Company, may result in the Shares issuable pursuant to the Purchase Agreement to exceed the number of the Company’s shares of common stock that then remain authorized but unissued, unreserved and available for issuance.

Our opinion is limited solely to matters set forth herein. The law covered by the opinion expressed herein is limited to the Delaware General Corporation Law. We are not rendering any opinion with respect to federal law, including federal securities laws, or state blue sky securities laws.

Based upon the foregoing, our examination of such documents and other matters as we deem relevant, we are of the opinion that the Shares have been duly authorized and, subject to issuance by the Company at a price not less than the Minimum Price, when delivered and paid for in accordance with the Purchase Agreement and in accordance with any reservation of shares or other restrictions or limitations imposed by the Company’s board of directors (or a duly authorized committee thereof) on sales of Shares by the Company under the Purchase Agreement, will be validly issued, fully paid and nonassessable.

Honigman LLP • 650 Trade Centre Way • Suite 200 • Kalamazoo, Michigan 49002-0402

We hereby consent to the filing of this opinion as Exhibit 5.1 to the Company's Current Report on Form 8-K dated August 11, 2023 and to the reference to our firm under the caption "Legal Matters" in the Prospectus Supplement. In giving such consent, we do not admit that we are within the category of persons whose consent is required by Section 7 of the Securities Act or the rules and regulations promulgated thereunder by the Commission. This opinion is expressed as of the date hereof, and we disclaim any undertaking to advise you of any subsequent changes in the facts stated or assumed herein or of any subsequent changes in applicable law.

Very truly yours,
/s/ Honigman LLP
Honigman LLP

Honigman LLP • 650 Trade Centre Way • Suite 200 • Kalamazoo, Michigan 49002-0402

PURCHASE AGREEMENT

PURCHASE AGREEMENT (the "Agreement"), dated as of August 10, 2023, by and between **OCUPHIRE PHARMA, INC.**, a Delaware corporation (the "Company"), and **LINCOLN PARK CAPITAL FUND, LLC**, an Illinois limited liability company (the "Investor").

WHEREAS:

Subject to the terms and conditions set forth in this Agreement, the Company wishes to sell to the Investor, and the Investor wishes to buy from the Company, up to Fifty Million Dollars (\$50,000,000) of the Company's common stock, par value \$0.0001 per share (the "Common Stock"). The shares of Common Stock to be purchased hereunder are referred to herein as the "Purchase Shares."

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 the Investor hereby agree as follows:

1. CERTAIN DEFINITIONS.

For purposes of this Agreement, the following terms shall have the following meanings:

(a) "Accelerated Purchase Date" means, with respect to an Accelerated Purchase made pursuant to Section 2(b) hereof, the Business Day immediately following the applicable Regular Purchase Date with respect to the corresponding Regular Purchase referred to in clause (i) of the second sentence of Section 2(b) hereof.

(b) "Accelerated Purchase Minimum Price Threshold" means, with respect to an Accelerated Purchase made pursuant to Section 2(b) hereof, the minimum per share price threshold set forth by the Company (if any) in the applicable Accelerated Purchase Notice.

(c) "Accelerated Purchase Notice" means, with respect to an Accelerated Purchase made pursuant to Section 2(b) hereof, an irrevocable written notice from the Company to the Investor directing the Investor to purchase the number of Purchase Shares specified by the Company therein as the Accelerated Purchase Share Amount to be purchased by the Investor (such specified Accelerated Purchase Share Amount subject to adjustment in accordance with Section 2(b) hereof as necessary to give effect to the Purchase Share amount limitations applicable to such Accelerated Purchase Share Amount as set forth in this Agreement) at the applicable Accelerated Purchase Price on the applicable Accelerated Purchase Date for such Accelerated Purchase.

(d) "Accelerated Purchase Price" means, with respect to an Accelerated Purchase made pursuant to Section 2(b) hereof, ninety-six and a half percent (96.5%) of the lower of (i) the VWAP for the period beginning at 9:30:01 a.m., Eastern time, on the applicable Accelerated Purchase Date, or such other time publicly announced by the Principal Market as the official open (or commencement) of trading on the Principal Market on such applicable Accelerated Purchase Date, or such later time on the applicable Accelerated Purchase Date as mutually agreed by the Company and the Investor and set forth in the applicable Accelerated Purchase Notice for such Accelerated Purchase (the "Accelerated Purchase Commencement Time"), and ending at the earliest of (A) 4:00:00 p.m., Eastern time, on such applicable Accelerated Purchase Date, or such other time publicly announced by the Principal Market as the official close of trading on the Principal Market on such applicable Accelerated Purchase Date, (B) such time, from and after the Accelerated Purchase Commencement Time for such Accelerated Purchase, that the total number (or volume) of shares of Common Stock traded on the Principal Market has exceeded the applicable Accelerated Purchase Share Volume Maximum, and (C) such time, from and after the Accelerated Purchase Commencement Time for such Accelerated Purchase, that the Sale Price has fallen below the applicable Accelerated Purchase Minimum Price Threshold (if any) (such earliest of (i)(A), (i)(B) and (i)(C) above, the "Accelerated Purchase Ending Time"), and (ii) the Closing Sale Price of the Common Stock on such applicable Accelerated Purchase Date (in each case, to be appropriately adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction).

(e) “Accelerated Purchase Share Amount” means, with respect to an Accelerated Purchase made pursuant to Section 2(b) hereof, the number of Purchase Shares directed by the Company to be purchased by the Investor in an applicable Accelerated Purchase Notice, which number of Purchase Shares shall not exceed the lesser of (i) 300% of the number of Purchase Shares directed by the Company to be purchased by the Investor pursuant to the corresponding Regular Purchase referred to in clause (i) of the second sentence of Section 2(b) hereof (such corresponding Regular Purchase being subject to the applicable Regular Purchase Share Limit) and (ii) an amount equal to (A) the Accelerated Purchase Share Percentage multiplied by (B) the total number (or volume) of shares of Common Stock traded on the Principal Market during the period on the applicable Accelerated Purchase Date beginning at the Accelerated Purchase Commencement Time for such Accelerated Purchase and ending at the Accelerated Purchase Ending Time for such Accelerated Purchase; provided, however, that the parties may mutually agree at any time to increase the maximum number of Purchase Shares the Company may direct the Investor to purchase in any Accelerated Purchase Notice for an Accelerated Purchase at the applicable Accelerated Purchase Price to up to 1,000,000 Purchase Shares or any number of Purchase Shares that shall not exceed 4.99% of the then outstanding shares of Common Stock.

(f) “Accelerated Purchase Share Percentage” means, with respect to an Accelerated Purchase made pursuant to Section 2(b) hereof, thirty percent (30%).

(g) “Accelerated Purchase Share Volume Maximum” means, with respect to an Accelerated Purchase made pursuant to Section 2(b) hereof, a number of shares of Common Stock equal to (i) the number of Purchase Shares specified by the Company in the applicable Accelerated Purchase Notice as the Accelerated Purchase Share Amount to be purchased by the Investor in such Accelerated Purchase, divided by (ii) the Accelerated Purchase Share Percentage (to be appropriately adjusted for any applicable reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction).

(h) “Additional Accelerated Purchase Date” means, with respect to an Additional Accelerated Purchase made pursuant to Section 2(c) hereof, the Business Day (i) that is the Accelerated Purchase Date with respect to the corresponding Accelerated Purchase referred to in clause (i) of the proviso in the second sentence of Section 2(c) hereof and (ii) on which the Investor receives, prior to 1:00 p.m., Eastern time, on such Business Day, a valid Additional Accelerated Purchase Notice for such Additional Accelerated Purchase in accordance with this Agreement.

(i) “Additional Accelerated Purchase Minimum Price Threshold” means, with respect to an Additional Accelerated Purchase made pursuant to Section 2(c) hereof, the minimum per share price threshold (if any) set forth by the Company in the applicable Additional Accelerated Purchase Notice.

(j) “Additional Accelerated Purchase Notice” means, with respect to an Additional Accelerated Purchase made pursuant to Section 2(c) hereof, an irrevocable written notice from the Company to the Investor directing the Investor to purchase the number of Purchase Shares specified by the Company therein as the Additional Accelerated Purchase Share Amount to be purchased by the Investor (such specified Additional Accelerated Purchase Share Amount subject to adjustment in accordance with Section 2(c) hereof as necessary to give effect to the Purchase Share amount limitations applicable to such Additional Accelerated Purchase Share Amount as set forth in this Agreement) at the applicable Additional Accelerated Purchase Price on the applicable Additional Accelerated Purchase Date for such Additional Accelerated Purchase.

(k) “Additional Accelerated Purchase Price” means, with respect to an Additional Accelerated Purchase made pursuant to Section 2(c) hereof, ninety-six and a half percent (96.5%) of the lower of (i) the VWAP for the period on the applicable Additional Accelerated Purchase Date, beginning at the time mutually agreed by the Company and the Investor and set forth in the applicable Additional Accelerated Purchase Notice delivered by the Company to the Investor with respect to such Additional Accelerated Purchase, which shall not be earlier than the latest of (A) the applicable Accelerated Purchase Ending Time with respect to the corresponding Accelerated Purchase referred to in clause (i) of the proviso in the second sentence of Section 2(c) hereof on such Additional Accelerated Purchase Date, (B) the applicable Additional Accelerated Purchase Ending Time with respect to the most recently completed prior Additional Accelerated Purchase on such Additional Accelerated Purchase Date, as applicable, and (C) the time at which all Purchase Shares subject to all prior Accelerated Purchases and Additional Accelerated Purchases (as applicable), including, without limitation, those that have been effected on the same Business Day as the applicable Additional Accelerated Purchase Date with respect to which the applicable Additional Accelerated Purchase relates, have theretofore been received by the Investor as DWAC Shares in accordance with this Agreement (such mutually agreed beginning time, the “Additional Accelerated Purchase Commencement Time”), and ending at the earliest of (X) 4:00 p.m., Eastern time, on such Additional Accelerated Purchase Date, or such other time publicly announced by the Principal Market as the official close of trading on the Principal Market on such Additional Accelerated Purchase Date, (Y) such time, from and after the Additional Accelerated Purchase Commencement Time for such Additional Accelerated Purchase, that total number (or volume) of shares of Common Stock traded on the Principal Market has exceeded the applicable Additional Accelerated Purchase Share Volume Maximum, and (Z) such time, from and after the Additional Accelerated Purchase Commencement Time for such Additional Accelerated Purchase, that the Sale Price has fallen below the applicable Additional Accelerated Purchase Minimum Price Threshold (if any) (such earliest of (i)(X), (i)(Y) and (i)(Z) above, the “Additional Accelerated Purchase Ending Time”), and (ii) the Closing Sale Price of the Common Stock on such Additional Accelerated Purchase Date (to be appropriately adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction).

(l) “Additional Accelerated Purchase Share Amount” means, with respect to an Additional Accelerated Purchase made pursuant to Section 2(c) hereof, the number of Purchase Shares directed by the Company to be purchased by the Investor on an Additional Accelerated Purchase Notice, which number of Purchase Shares shall not exceed the lesser of (i) 300% of the number of Purchase Shares directed by the Company to be purchased by the Investor pursuant to the corresponding Regular Purchase referred to in clause (i)(A) of the second sentence of Section 2(b) hereof (such corresponding Regular Purchase being subject to the applicable Regular Purchase Share Limit) and (ii) an amount equal to (A) the Additional Accelerated Purchase Share Percentage multiplied by (B) the total number (or volume) of shares of Common Stock traded on the Principal Market during the period on the applicable Additional Accelerated Purchase Date beginning at the Additional Accelerated Purchase Commencement Time for such Additional Accelerated Purchase and ending at the Additional Accelerated Purchase Ending Time for such Additional Accelerated Purchase; provided, however, that the parties may mutually agree at any time to increase the maximum number of Purchase Shares the Company may direct the Investor to purchase in any Additional Accelerated Purchase Notice for an Additional Accelerated Purchase at the applicable Additional Accelerated Purchase Price to up to 1,000,000 Purchase Shares or any number of Purchase Shares that shall not exceed 4.99% of the then outstanding shares of Common Stock.

(m) “Additional Accelerated Purchase Share Percentage” means, with respect to an Additional Accelerated Purchase made pursuant to Section 2(c) hereof, thirty percent (30%).

(n) “Additional Accelerated Purchase Share Volume Maximum” means, with respect to an Additional Accelerated Purchase made pursuant to Section 2(c) hereof, a number of shares of Common Stock equal to (i) the number of Purchase Shares specified by the Company in the applicable Additional Accelerated Purchase Notice as the Additional Accelerated Purchase Share Amount to be purchased by the Investor in such Additional Accelerated Purchase, divided by (ii) the Additional Accelerated Purchase Share Percentage (to be appropriately adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction).

(o) “Alternate Adjusted Regular Purchase Share Limit” means, with respect to a Regular Purchase made pursuant to Section 2(a) hereof, the maximum number of Purchase Shares which, taking into account the applicable per share Regular Purchase Price therefor calculated in accordance with this Agreement, would enable the Company to deliver to the Investor, on the applicable Regular Purchase Date for such Regular Purchase, a Regular Purchase Notice for a Purchase Amount equal to, or as closely approximating without exceeding, One Hundred Thousand Dollars (\$100,000).

(p) “Available Amount” means, initially, Fifty Million Dollars (\$50,000,000) in the aggregate, which amount shall be reduced by the Purchase Amount each time the Investor purchases Purchase Shares pursuant to Section 2 hereof.

(q) “Average Price” means a price per Purchase Share (rounded to the nearest tenth of a cent) equal to the quotient obtained by dividing (i) the aggregate gross purchase price paid by the Investor for all Purchase Shares purchased pursuant to this Agreement, by (ii) the aggregate number of Purchase Shares issued pursuant to this Agreement.

(r) “Bankruptcy Law” means Title 11, U.S. Code, or any similar federal or state law for the relief of debtors.

(s) “Base Price” means a price per Purchase Share equal to the sum of (i) the Signing Market Price and (ii) \$0.259 (subject to adjustment for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction that occurs on or after the date of this Agreement).

(t) “Base Prospectus” shall have the meaning ascribed to such term in the Registration Rights Agreement.

(u) “Business Day” means any day on which the Principal Market is open for trading, including any day on which the Principal Market is open for trading for a period of time less than the customary time.

(v) “Closing Sale Price” means, for any security as of any date, the last closing sale price for such security on the Principal Market as reported by the Principal Market.

(w) “Confidential Information” means any information disclosed by either party to the other party, either directly or indirectly, in writing, orally or by inspection of tangible objects (including, without limitation, documents, prototypes, samples, plant and equipment), which is designated as “Confidential,” “Proprietary” or some similar designation. Information communicated orally shall be considered Confidential Information if such information is confirmed in writing as being Confidential Information within ten (10) Business Days after the initial disclosure. Confidential Information also includes information that even if not so designated or so confirmed is reasonably understood by the parties to be confidential based on the nature of the information disclosed. Confidential Information may also include information disclosed to a disclosing party by third parties. Confidential Information shall not, however, include any information which (i) was publicly known and made generally available in the public domain prior to the time of disclosure by the disclosing party; (ii) becomes publicly known and made generally available after disclosure by the disclosing party to the receiving party through no action or inaction of the receiving party; (iii) is already in the possession of the receiving party without confidential restriction at the time of disclosure by the disclosing party as shown by the receiving party’s files and records immediately prior to the time of disclosure; (iv) is obtained by the receiving party from a third party without a breach of such third party’s obligations of confidentiality; (v) is independently developed by the receiving party without use of or reference to the disclosing party’s Confidential Information, as shown by documents and other competent evidence in the receiving party’s possession; or (vi) is required by law to be disclosed by the receiving party, provided that the receiving party gives the disclosing party prompt written notice of such requirement prior to such disclosure and assistance in obtaining an order protecting the information from public disclosure.

- (x) “Custodian” means any receiver, trustee, assignee, liquidator or similar official under any Bankruptcy Law.
- (y) “DTC” means The Depository Trust Company, or any successor performing substantially the same function for the Company.
- (z) “DWAC Shares” means shares of Common Stock that are (i) issued in electronic form, (ii) freely tradable and transferable and without restriction on resale and (iii) timely credited by the Company to the Investor’s or its designee’s specified Deposit/Withdrawal at Custodian (DWAC) account with DTC under its Fast Automated Securities Transfer (FAST) Program, or any similar program hereafter adopted by DTC performing substantially the same function.
- (aa) “Exchange Act” means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.
- (bb) “Floor Price” means, with respect to a Regular Purchase made pursuant to Section 2(a) hereof, \$0.25, which shall be appropriately adjusted for any reorganization, recapitalization, non-cash dividend, stock split or other similar transaction and, effective upon the consummation of any such reorganization, recapitalization, non-cash dividend, stock split or other similar transaction, the Floor Price shall mean the lower of (i) the adjusted price and (ii) \$1.00.
- (cc) “Fully Adjusted Regular Purchase Share Limit” means, with respect to any reorganization, recapitalization, non-cash dividend, stock split or other similar transaction from and after the date of this Agreement, the Regular Purchase Share Limit (as defined in Section 2(a) hereof) in effect on the applicable date of determination, after giving effect to the full proportionate adjustment thereto made pursuant to Section 2(a) hereof for or in respect of such reorganization, recapitalization, non-cash dividend, stock split or other similar transaction.
- (dd) “Initial Prospectus Supplement” shall have the meaning ascribed to such term in the Registration Rights Agreement.
- (ee) “Material Adverse Effect” means any material adverse effect on (i) the enforceability of any Transaction Document, (ii) the results of operations, assets, business or financial condition of the Company, other than any material adverse effect that resulted primarily from (A) any change in the United States or foreign economies or securities or financial markets in general that does not have a disproportionate effect on the Company, (B) any change that generally affects the industry in which the Company operate that does not have a disproportionate effect on the Company, (C) any change arising in connection with earthquakes, pandemics, hostilities, acts of war, sabotage or terrorism or military actions or any escalation or material worsening of any such pandemics, hostilities, acts of war, sabotage or terrorism or military actions existing as of the date hereof, (D) any action taken by the Investor, its affiliates or its or their successors and assigns with respect to the transactions contemplated by this Agreement, (E) the effect of any change in applicable laws or accounting rules that does not have a disproportionate effect on the Company, or (F) any change resulting from compliance with terms of this Agreement or the consummation of the transactions contemplated by this Agreement, or (iii) the Company’s ability to perform in any material respect on a timely basis its obligations under any Transaction Document to be performed as of the date of determination.

(ff) “Maturity Date” means the first day of the month immediately following the thirty (30) month anniversary of the Commencement Date.

(gg) “Person” means an individual or entity including but not limited to any limited liability company, a partnership, a joint venture, a corporation, a trust, an unincorporated organization and a government or any department or agency thereof.

(hh) “Principal Market” means The Nasdaq Capital Market (or any nationally recognized successor thereto); provided however, that in the event the Company’s Common Stock is ever listed or traded on The Nasdaq Global Market, The Nasdaq Global Select Market, the New York Stock Exchange, the NYSE American, the NYSE Arca, or the OTCQX or OTCQB operated by the OTC Markets Group, Inc. (or any nationally recognized successors thereto), then the “Principal Market” shall mean such other market or exchange on which the Company’s Common Stock is then listed or traded or any successor thereto.

(ii) “Prospectus” shall have the meaning ascribed to such term in the Registration Rights Agreement.

(jj) “Prospectus Supplement” shall have the meaning ascribed to such term in the Registration Rights Agreement.

(kk) “Purchase Amount” means, with respect to a Regular Purchase, an Accelerated Purchase or an Additional Accelerated Purchase made hereunder, as applicable, the portion of the Available Amount to be purchased by the Investor pursuant to Section 2 hereof.

(ll) “Registration Statement” shall have the meaning ascribed to such term in the Registration Rights Agreement.

(mm) “Regular Purchase Date” means, with respect to a Regular Purchase made pursuant to Section 2(a) hereof, the Business Day on which the Investor receives, after 4:00 p.m., Eastern time, but prior to 5:00 p.m., Eastern time, on such Business Day, a valid Regular Purchase Notice for such Regular Purchase in accordance with this Agreement.

(nn) “Regular Purchase Notice” means, with respect to a Regular Purchase pursuant to Section 2(a) hereof, an irrevocable written notice from the Company to the Investor directing the Investor to buy a specified number of Purchase Shares (subject to the Purchase Share limitations contained in Section 2(a) hereof) at the applicable Regular Purchase Price for such Regular Purchase in accordance with this Agreement.

(oo) “Regular Purchase Price” means, with respect to a Regular Purchase made pursuant to Section 2(a) hereof, the lower of: (i) the lowest Sale Price on the applicable Regular Purchase Date for such Regular Purchase and (ii) the arithmetic average of the three (3) lowest Closing Sale Prices for the Common Stock during the ten (10) consecutive Business Days ending on the Business Day immediately preceding such Regular Purchase Date for such Regular Purchase (in each case, to be appropriately adjusted for any reorganization, recapitalization, non-cash dividend, stock split or other similar transaction that occurs on or after the date of this Agreement).

(pp) “Regular Purchase Share Limit” means, with respect to a Regular Purchase pursuant to Section 2(a) hereof, Fifty Thousand (50,000) Purchase Shares, subject to adjustment as set forth below; provided, however, that (i) the Regular Purchase Share Limit shall be increased to Sixty Thousand (60,000) Purchase Shares, if the Closing Sale Price of the Common Stock on the applicable Regular Purchase Date is not below \$5.00, and (ii) the Regular Purchase Share Limit shall be increased to Seventy Thousand (70,000) Purchase Shares, if the Closing Sale Price of the Common Stock on the applicable Regular Purchase Date is not below \$7.50 (all of which share and dollar amounts shall be appropriately proportionately adjusted for any reorganization, recapitalization, non-cash dividend, stock split or other similar transaction; *provided* that if, after giving effect to the full proportionate adjustment to the Regular Purchase Share Limit therefor, the Fully Adjusted Regular Purchase Share Limit then in effect would preclude the Company from delivering to the Investor, on a Regular Purchase Date for a Regular Purchase hereunder, a Regular Purchase Notice for a Purchase Amount for which the total Regular Purchase Price payable by the Investor therefor would not equal or exceed One Hundred Thousand Dollars (\$100,000) (which shall be determined by multiplying (X) the Fully Adjusted Regular Purchase Share Limit then in effect on such Regular Purchase Date, by (Y) the applicable Regular Purchase Price per Purchase Share for such Regular Purchase calculated in accordance with this Agreement), the Regular Purchase Share Limit shall equal the applicable Alternate Adjusted Regular Purchase Share Limit); provided, further, however, that the dollar value of the Investor’s maximum committed obligation under any single Regular Purchase, other than any Regular Purchase with respect to which an Alternate Adjusted Regular Purchase Share Limit shall apply, shall not exceed One Million Dollars (\$1,000,000); and provided, further, however, that the parties may mutually agree at any time to increase the maximum number of Purchase Shares the Company may direct the Investor to purchase in any Regular Purchase Notice for a Regular Purchase at the applicable Regular Purchase Price to up to 1,000,000 Purchase Shares or any number of Purchase Shares that shall not exceed 4.99% of the then outstanding shares of Common Stock.

(qq) “Sale Price” means any trade price for the shares of Common Stock on the Principal Market as reported by the Principal Market.

(rr) “SEC” means the U.S. Securities and Exchange Commission.

(ss) “Securities” means, collectively, the Purchase Shares and the Commitment Shares.

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

(uu) “Signing Market Price” means \$4.14, representing the official closing price of the Common Stock on The Nasdaq Capital Market (as reflected on Nasdaq.com) on the date of this Agreement.

(vv) “Subsidiary” means any Person the Company wholly-owns or controls, or in which the Company, directly or indirectly, owns a majority of the voting stock or similar voting interest, in each case that would be disclosable pursuant to Item 601(b)(21) of Regulation S-K promulgated under the Securities Act.

(ww) “Transaction Documents” means, collectively, this Agreement and the schedules and exhibits hereto, the Registration Rights Agreement and the schedules and exhibits thereto, and each of the other agreements, documents, certificates and instruments entered into or furnished by the parties hereto in connection with the transactions contemplated hereby and thereby.

(xx) “Transfer Agent” means American Stock Transfer & Trust Company, LLC, or such other Person who is then serving as the transfer agent for the Company in respect of the Common Stock.

(yy) “VWAP” means in respect of an Accelerated Purchase Date and an Additional Accelerated Purchase Date, as applicable, the volume weighted average price of the Common Stock on the Principal Market, as reported on the Principal Market or by another reputable source such as Bloomberg, L.P.

2. PURCHASE OF COMMON STOCK.

Subject to the terms and conditions set forth in this Agreement, the Company has the right to sell to the Investor, and the Investor has the obligation to purchase from the Company, Purchase Shares as follows:

(a) Commencement of Regular Sales of Common Stock. Upon the satisfaction of all of the conditions set forth in Sections 7 and 8 hereof (the “Commencement” and the date of satisfaction of such conditions the “Commencement Date”), and thereafter, the Company shall have the right, but not the obligation, to direct the Investor, by its delivery to the Investor of a Regular Purchase Notice from time to time in accordance with this Agreement, to purchase up to the Regular Purchase Share Limit at the applicable Regular Purchase Price on the applicable Regular Purchase Date (each such purchase a “Regular Purchase”). The Company may deliver a Regular Purchase Notice to the Investor as often as every Business Day, so long as (i) the Closing Sale Price of the Common Stock on such Business Day is not less than the Floor Price and (ii) all Purchase Shares subject to all Regular Purchases, Accelerated Purchases and Additional Accelerated Purchases effected prior to such Business Day (as applicable) have theretofore been received by the Investor as DWAC Shares in accordance with this Agreement.

(b) Accelerated Purchases. Subject to the terms and conditions of this Agreement, from and after the Commencement Date, in addition to purchases of Purchase Shares as described in Section 2(a) above, the Company shall also have the right, but not the obligation, to direct the Investor, by its delivery to the Investor of an Accelerated Purchase Notice from time to time in accordance with this Agreement, to purchase the applicable Accelerated Purchase Share Amount at the Accelerated Purchase Price on the Accelerated Purchase Date therefor in accordance with this Agreement (each such purchase, an “Accelerated Purchase”). The Company may deliver an Accelerated Purchase Notice to the Investor only (i) on a Regular Purchase Date on which the Company also properly submitted a Regular Purchase Notice for a Regular Purchase of not less than the Regular Purchase Share Limit then in effect, and (ii) if all Purchase Shares subject to all Regular Purchases, Accelerated Purchases and Additional Accelerated Purchases effected prior to the Regular Purchase Date referred to in clause (i) hereof (as applicable) have theretofore been received by the Investor as DWAC Shares in accordance with this Agreement. Within one (1) Business Day after completion of each Accelerated Purchase Date for an Accelerated Purchase, the Investor will provide to the Company a written confirmation of such Accelerated Purchase setting forth the applicable Accelerated Purchase Share Amount and Accelerated Purchase Price for such Accelerated Purchase (each, an “Accelerated Purchase Confirmation”).

(c) Additional Accelerated Purchases. Subject to the terms and conditions of this Agreement, from and after the Commencement Date, in addition to purchases of Purchase Shares as described in Section 2(a) and Section 2(b) above, the Company shall also have the right, but not the obligation, to direct the Investor, by its timely delivery to the Investor of an Additional Accelerated Purchase Notice on an Additional Accelerated Purchase Date in accordance with this Agreement, to purchase the applicable Additional Accelerated Purchase Share Amount at the applicable Additional Accelerated Purchase Price therefor in accordance with this Agreement (each such purchase, an “Additional Accelerated Purchase”). The Company may deliver multiple Additional Accelerated Purchase Notices to the Investor on an Additional Accelerated Purchase Date only (i) on a Business Day that is also the Accelerated Purchase Date for an Accelerated Purchase with respect to which each of the conditions set forth in the second sentence of Section 2(b) have been satisfied, and (ii) if all Purchase Shares subject to all prior Regular Purchases, Accelerated Purchases and Additional Accelerated Purchases, including, without limitation, those that have been effected on the same Business Day as the applicable Additional Accelerated Purchase Date with respect to which the applicable Additional Accelerated Purchase relates, have theretofore been received by the Investor as DWAC Shares in accordance with this Agreement. The Investor will provide to the Company a written confirmation of each Additional Accelerated Purchase on such Additional Accelerated Purchase Date setting forth the applicable Additional Accelerated Purchase Share Amount and Additional Accelerated Purchase Price for each such Additional Accelerated Purchase on such Additional Accelerated Purchase Date in the Accelerated Purchase Confirmation for the related Accelerated Purchase as provided in the last sentence of Section 2(b).

(d) Excess Share Limitations. If the Company delivers any Regular Purchase Notice for a Purchase Amount in excess of the Regular Purchase Share Limit, such Regular Purchase Notice shall be void *ab initio* to the extent of the amount by which the number of Purchase Shares set forth in such Regular Purchase Notice exceeds the number of Purchase Shares which the Company is permitted to include in such Regular Purchase Notice in accordance herewith, and the Investor shall have no obligation to purchase such excess Purchase Shares in respect of such Regular Purchase Notice; provided, however, that the Investor shall remain obligated to purchase the number of Purchase Shares which the Company is permitted to include in such Regular Purchase Notice. If the Company delivers any Accelerated Purchase Notice or Additional Accelerated Purchase Notice directing the Investor to purchase an amount of Purchase Shares that exceeds the Accelerated Purchase Share Amount or Additional Accelerated Purchase Amount, as applicable, that the Company is then permitted to include in such Accelerated Purchase Notice or Additional Accelerated Purchase Notice, respectively, such Accelerated Purchase Notice or Additional Accelerated Purchase Notice, as applicable, shall be void *ab initio* to the extent of the amount by which the number of Purchase Shares set forth in such Accelerated Purchase Notice or Additional Accelerated Purchase Notice, as applicable, exceeds the Accelerated Purchase Share Amount or Additional Accelerated Purchase Amount, respectively, that the Company is then permitted to include in such Accelerated Purchase Notice or Additional Accelerated Purchase Notice, respectively (which shall be confirmed in an Accelerated Purchase Confirmation), and the Investor shall have no obligation to purchase such excess Purchase Shares; provided, however, that the Investor shall remain obligated to purchase the Accelerated Purchase Share Amount or Additional Accelerated Purchase Amount, as applicable, which the Company is permitted to include in such Accelerated Purchase Notice or Additional Accelerated Purchase Notice, respectively.

(c) Payment for Purchase Shares. For each Regular Purchase, the Investor shall pay to the Company an amount equal to the Purchase Amount with respect to such Regular Purchase as full payment for such Purchase Shares via wire transfer of immediately available funds on the same Business Day that the Investor receives such Purchase Shares, if such Purchase Shares are received by the Investor before 1:00 p.m., Eastern time, or, if such Purchase Shares are received by the Investor after 1:00 p.m., Eastern time, the next Business Day. For each Accelerated Purchase and each Additional Accelerated Purchase, the Investor shall pay to the Company an amount equal to the Purchase Amount with respect to such Accelerated Purchase and Additional Accelerated Purchase, respectively, as full payment for such Purchase Shares via wire transfer of immediately available funds on the second (2nd) Business Day following the date that the Investor receives such Purchase Shares. If the Company or the Transfer Agent shall fail for any reason or for no reason to electronically transfer any Purchase Shares as DWAC Shares in respect of a Regular Purchase, an Accelerated Purchase or an Additional Accelerated Purchase (as applicable) within two (2) Business Days following the receipt by the Company of the Regular Purchase Price, Accelerated Purchase Price or Additional Accelerated Purchase Price (as applicable) therefor in compliance with this Section 2(e), and if on or after such Business Day the Investor purchases (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by the Investor of such Purchase Shares that the Investor anticipated receiving from the Company in respect of such Regular Purchase, Accelerated Purchase or Additional Accelerated Purchase, then the Company shall, within two (2) Business Days after the Investor's request, either (i) pay cash to the Investor in an amount equal to the Investor's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased (the "Cover Price"), at which point the Company's obligation to deliver such Purchase Shares as DWAC Shares shall terminate, or (ii) promptly honor its obligation to deliver to the Investor such Purchase Shares as DWAC Shares and pay cash to the Investor in an amount equal to the excess (if any) of the Cover Price over the total Purchase Amount paid by the Investor pursuant to this Agreement for all of the Purchase Shares to be purchased by the Investor in connection with such Regular Purchase, Accelerated Purchase or Additional Accelerated Purchase (as applicable). The Company shall not issue any fraction of a share of Common Stock upon any Regular Purchase, Accelerated Purchase or Additional Accelerated Purchase. If the issuance would result in the issuance of a fraction of a share of Common Stock, the Company shall round such fraction of a share of Common Stock up or down to the nearest whole share. All payments made under this Agreement shall be made in lawful money of the United States of America or wire transfer of immediately available funds to such account as the Company may from time to time designate by written notice in accordance with the provisions of this Agreement. Whenever any amount expressed to be due by the terms of this Agreement is due on any day that is not a Business Day, the same shall instead be due on the next succeeding day that is a Business Day.

(f) Compliance with Rules of Principal Market.

(i) Exchange Cap. Subject to Section 2(f)(ii) below, the Company shall not issue or sell any shares of Common Stock pursuant to this Agreement, and the Investor shall not purchase or acquire any shares of Common Stock pursuant to this Agreement, to the extent that after giving effect thereto, the aggregate number of shares of Common Stock that would be issued pursuant to this Agreement and the transactions contemplated hereby would exceed 4,195,058 (such number of shares equal to 19.99% of the shares of Common Stock outstanding immediately prior to the execution of this Agreement), which number of shares shall be (i) reduced, on a share-for-share basis, by the number of shares of Common Stock issued or issuable pursuant to any transaction or series of transactions that may be aggregated with the transactions contemplated by this Agreement under applicable rules of The Nasdaq Stock Market LLC and (ii) appropriately adjusted for any reorganization, recapitalization, non-cash dividend, stock split or other similar transaction that occurs after the date of this Agreement (such maximum number of shares, the "Exchange Cap"), unless and until the Company elects to solicit stockholder approval of the issuance of Common Stock as contemplated by this Agreement, and the stockholders of the Company have in fact approved the issuance of Common Stock as contemplated by this Agreement in accordance with the applicable rules of The Nasdaq Stock Market LLC. For the avoidance of doubt, the Company may, but shall be under no obligation to, request its stockholders to approve the issuance of Common Stock as contemplated by this Agreement; provided, that if stockholder approval is not obtained in accordance with this Section 2(f)(i), the Exchange Cap shall be applicable for all purposes of this Agreement and the transactions contemplated hereby at all times during the term of this Agreement (except as set forth in Section 2(f)(ii) below).

(ii) At-Market Transaction. Notwithstanding Section 2(f)(i) above, the Exchange Cap shall not be applicable for any purposes of this Agreement and the transactions contemplated hereby, solely to the extent that (and only for so long as) the Average Price shall equal or exceed the Base Price (it being hereby acknowledged and agreed that the Exchange Cap shall be applicable for all purposes of this Agreement and the transactions contemplated hereby at all other times during the term of this Agreement, unless the stockholder approval referred to in Section 2(f)(i) is obtained). The parties acknowledge and agree that the Signing Market Price used to determine the Base Price hereunder represents the lower of (i) the Nasdaq official closing price of the Common Stock on The Nasdaq Capital Market (as reflected on Nasdaq.com) on the date of this Agreement and (ii) the average Nasdaq official closing price of the Common Stock on The Nasdaq Capital Market (as reflected on Nasdaq.com) for the five (5) consecutive trading days ending on the date of this Agreement.

(iii) General. The Company shall not issue any shares of Common Stock pursuant to this Agreement if such issuance would reasonably be expected to result in (A) a violation of the Securities Act or (B) a breach of the rules and regulations of The Nasdaq Stock Market LLC. The provisions of this Section 2(f) shall be implemented in a manner otherwise than in strict conformity with the terms hereof only if necessary to ensure compliance with the Securities Act and the rules and regulations of The Nasdaq Stock Market.

(g) Beneficial Ownership Limitation. Notwithstanding anything to the contrary contained in this Agreement, the Company shall not issue or sell, and the Investor shall not purchase or acquire, any shares of Common Stock under this Agreement which, when aggregated with all other shares of Common Stock then beneficially owned by the Investor and its affiliates (as calculated pursuant to Section 13(d) of the Exchange Act and Rule 13d-3 promulgated thereunder), would result in the beneficial ownership by the Investor of more than 4.99% of the outstanding shares of Common Stock (the "Beneficial Ownership Limitation"). Upon the written or oral request of the Investor, the Company shall promptly (but not later than 24 hours) confirm orally or in writing to the Investor the number of shares of Common Stock then outstanding. The Investor, upon written notice to the Company, may increase the Beneficial Ownership Limitation provisions of this Section 2(g), provided that the Beneficial Ownership Limitation in no event exceeds 9.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock pursuant to this Agreement and the provisions of this Section 2(g) shall continue to apply. Any increase in the Beneficial Ownership Limitation will not be effective until the 61st day after such written notice is delivered to the Company. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 2(g) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such limitation. The Investor and the Company shall each cooperate in good faith in the determinations required hereby and the application hereof. The Investor's written certification to the Company of the applicability of the Beneficial Ownership Limitation, and the resulting effect thereof hereunder at any time, shall be conclusive with respect to the applicability thereof and such result absent manifest error.

3. INVESTOR'S REPRESENTATIONS AND WARRANTIES.

The Investor represents and warrants to the Company that as of the date hereof and as of the Commencement Date:

(a) Organization, Authority. Investor is an entity duly organized, validly existing and in good standing under the laws of the jurisdiction of its organization, with the requisite power and authority to enter into and to consummate the transactions contemplated by this Agreement and otherwise to carry out its obligations hereunder and thereunder.

(b) Accredited Investor Status. The Investor is an "accredited investor" as that term is defined in Rule 501(a)(3) of Regulation D promulgated under the Securities Act.

(c) Information. The Investor understands that its investment in the Securities involves a high degree of risk. The Investor (i) is able to bear the economic risk of an investment in the Securities including a total loss thereof, (ii) has such knowledge and experience in financial and business matters that it is capable of evaluating the merits and risks of the proposed investment in the Securities and (iii) has had an opportunity to ask questions of and receive answers from the officers of the Company concerning the financial condition and business of the Company and other matters related to an investment in the Securities. Neither such inquiries nor any other due diligence investigations conducted by the Investor or its representatives shall modify, amend or affect the Investor's right to rely on the Company's representations and warranties contained in Section 4 below. The Investor has sought such accounting, legal and tax advice as it has considered necessary to make an informed investment decision with respect to its acquisition of the Securities.

(d) No Governmental Review. The Investor understands that no U.S. 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 an investment in the Securities nor have such authorities passed upon or endorsed the merits of the offering of the Securities.

(e) Validity; Enforcement. This Agreement has been duly and validly authorized, executed and delivered on behalf of the Investor and is a valid and binding agreement of the Investor enforceable against the Investor in accordance with its terms, subject as to enforceability to general principles of equity and to applicable bankruptcy, insolvency, reorganization, moratorium, liquidation and other similar laws relating to, or affecting generally, the enforcement of applicable creditors' rights and remedies.

(f) Residency. The Investor is a resident of the State of Illinois.

(g) No Short Selling. The Investor represents and warrants to the Company that at no time prior to the date of this Agreement has any of the Investor, its agents, representatives or affiliates engaged in or effected, in any manner whatsoever, directly or indirectly, any (i) "short sale" (as such term is defined in Rule 200 of Regulation SHO of the Exchange Act) of the Common Stock or (ii) hedging transaction, which establishes a net short position with respect to the Common Stock.

4. REPRESENTATIONS AND WARRANTIES OF THE COMPANY.

The Company represents and warrants to the Investor that, except as set forth in the disclosure schedules attached hereto, which exceptions shall be deemed to be a part of the representations and warranties made hereunder, as of the date hereof and as of the Commencement Date:

(a) Organization and Qualification. The Company is an entity duly incorporated or otherwise organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation or organization, with the requisite corporate power and authority to own and use its properties and assets and to carry on its business as currently conducted. The Company is not in violation or default of any of the provisions of its certificate or articles of incorporation, bylaws or other organizational or charter documents. The Company is duly qualified to conduct business and is in good standing as a foreign corporation or other entity in each jurisdiction in which the nature of the business conducted or property owned by it makes such qualification necessary, except where the failure to be so qualified or in good standing, as the case may be, could not have or reasonably be expected to result in a Material Adverse Effect and no proceeding has been instituted in any such jurisdiction revoking, limiting or curtailing or seeking to revoke, limit or curtail such power and authority or qualification. The Company has no Subsidiaries.

(b) Authorization; Enforcement; Validity. (i) The Company has the requisite corporate power and authority to enter into and perform its obligations under this Agreement, the Registration Rights Agreement and each of the other Transaction Documents, and to issue the Securities in accordance with the terms hereof and thereof, (ii) the execution and delivery of the Transaction Documents by the Company and the consummation by it of the transactions contemplated hereby and thereby, including without limitation, the issuance of the Commitment Shares (as defined below in Section 5(e)) and the reservation for issuance and the issuance of the Purchase Shares issuable under this Agreement, have been duly authorized by the Company's Board of Directors and no further consent or authorization is required by the Company, its Board of Directors or its stockholders, (iii) this Agreement has been, and each other Transaction Document shall be on the Commencement Date, duly executed and delivered by the Company and (iv) each of this Agreement and the Registration Rights Agreement constitutes, and each other Transaction Document upon its execution on behalf of the Company, shall constitute, the valid and binding obligations of the Company enforceable against the Company in accordance with their terms, except as such enforceability may be limited by general principles of equity or applicable bankruptcy, insolvency, reorganization, moratorium, liquidation or similar laws relating to, or affecting generally, the enforcement of creditors' rights and remedies. The Board of Directors of the Company has approved resolutions substantially in the form set forth in Exhibit B attached hereto (the "Signing Resolutions") to authorize this Agreement, the Registration Rights Agreement and the transactions contemplated hereby and thereby. The Signing Resolutions are valid, in full force and effect and have not been modified or supplemented in any respect. The Company has delivered to the Investor a true copy of the minutes of a meeting of the Company's Board of Directors at which the Signing Resolutions were unanimously adopted by the Board of Directors, or a unanimous written consent of the Company's Board of Directors approving the Signing Resolutions was adopted in lieu of a meeting. Except as set forth in this Agreement, no other approvals or consents of the Company's Board of Directors, any authorized committee thereof, and/or stockholders is necessary under applicable laws and the Company's Certificate of Incorporation and/or Bylaws to authorize the execution and delivery of this Agreement, the Registration Rights Agreement or any of the transactions contemplated hereby or thereby, including, but not limited to, the issuance of the Securities.

(c) Capitalization. As of the date hereof, the authorized capital stock of the Company is set forth or incorporated by reference in the Registration Statement and the Initial Prospectus Supplement. Except as disclosed or incorporated by reference in the Registration Statement and the Prospectus, (i) no shares of the Company's capital stock are subject to preemptive rights or any other similar rights or any liens or encumbrances suffered or permitted by the Company, (ii) there are no outstanding debt securities, (iii) there are no outstanding options, warrants, scrip, rights to subscribe to, calls or commitments of any character whatsoever relating to, or securities or rights convertible into, any shares of capital stock of the Company, or contracts, commitments, understandings or arrangements by which the Company is or may become bound to issue additional shares of capital stock of the Company or options, warrants, scrip, rights to subscribe to, calls or commitments of any character whatsoever relating to, or securities or rights convertible into, any shares of capital stock of the Company, (iv) there are no agreements or arrangements under which the Company is obligated to register the sale of any of their securities under the Securities Act (except this Agreement and the Registration Rights Agreement), (v) there are no outstanding securities or instruments of the Company which contain any redemption or similar provisions, and there are no contracts, commitments, understandings or arrangements by which the Company is or may become bound to redeem a security of the Company, (vi) there are no securities or instruments containing anti-dilution or similar provisions that will be triggered by the issuance of the Securities as described in this Agreement and (vii) the Company does not have any stock appreciation rights or "phantom stock" plans or agreements or any similar plan or agreement. The Company has furnished to the Investor true and correct copies of the Company's Restated Certificate of Incorporation, as amended and as in effect on the date hereof (the "Certificate of Incorporation"), and the Company's Amended and Restated Bylaws, as amended and as in effect on the date hereof (the "Bylaws"), and summaries of the terms of all securities convertible into or exercisable for Common Stock, if any, and copies of any documents containing the material rights of the holders thereof in respect thereto.

(d) Issuance of Securities. Upon issuance and payment therefor in accordance with the terms and conditions of this Agreement, the Purchase Shares shall be validly issued, fully paid, and nonassessable and free from all taxes, liens, charges, restrictions, rights of first refusal, and preemptive rights with respect to the issue thereof, with the holders being entitled to all rights accorded to a holder of Common Stock. Upon issuance in accordance with the terms and conditions of this Agreement, the Commitment Shares shall be validly issued, fully paid, and nonassessable and free from all taxes, liens, charges, restrictions, rights of first refusal, and preemptive rights with respect to the issue thereof, with the holders being entitled to all rights accorded to a holder of Common Stock. 14,285,714 shares of Common Stock (subject to equitable adjustment for any reorganization, recapitalization, non-cash dividend, stock split or other similar transaction) have been duly authorized and reserved for issuance upon purchase under this Agreement as Purchase Shares.

(e) No Conflicts. The execution, delivery and performance of the Transaction Documents by the Company and the consummation by the Company of the transactions contemplated hereby and thereby (including, without limitation, the issuance of the Commitment Shares and the reservation for issuance and issuance of the Purchase Shares) will not (i) result in a violation of the Certificate of Incorporation, any Certificate of Designations, Preferences and Rights of any outstanding series of preferred stock of the Company or the Bylaws or (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 the Company is a party, or result in a violation of any law, rule, regulation, order, judgment or decree (including federal and state securities laws and regulations and the rules and regulations of the Principal Market applicable to the Company) or by which any property or asset of the Company is bound or affected, except in the case of conflicts, defaults, terminations, amendments, accelerations, cancellations and violations under clause (ii), which would not reasonably be expected to result in a Material Adverse Effect. The Company is not in violation of any term of or in default under its Certificate of Incorporation, any Certificate of Designation, Preferences and Rights of any outstanding series of preferred stock of the Company or Bylaws or their organizational charter or bylaws, respectively. The Company is not in violation of any term of or is in default under any material contract, agreement, mortgage, indebtedness, indenture, instrument, judgment, decree or order or any statute, rule or regulation applicable to the Company, except for possible conflicts, defaults, terminations or amendments that would not reasonably be expected to have a Material Adverse Effect. The business of the Company is not being conducted, and shall not be conducted, in violation of any law, ordinance, regulation of any Governmental Authority, except for possible violations, the sanctions for which either individually or in the aggregate would not reasonably be expected to have a Material Adverse Effect. Except as specifically contemplated by this Agreement and as required under the Securities Act or applicable state securities laws and the rules and regulations of the Principal Market, the Company is not required to obtain any consent, authorization or order of, or make any filing or registration with, any Governmental Authority in order for it to execute, deliver or perform any of its obligations under or contemplated by the Transaction Documents in accordance with the terms hereof or thereof. Except as set forth elsewhere in this Agreement, all consents, authorizations, orders, filings and registrations which the Company is required to obtain pursuant to the preceding sentence shall be obtained or effected on or prior to the Commencement Date.

(f) SEC Documents; Financial Statements. The Company has filed all reports, schedules, forms, statements and other documents required to be filed by the Company with the SEC under the Exchange Act, including pursuant to Section 13(a) or 15(d) thereof, and under the Securities Act, in each case during the 12-month period immediately preceding the date of this Agreement (the foregoing materials, including the exhibits thereto and documents incorporated by reference therein, being collectively referred to herein as the “SEC Documents”), on a timely basis or has received a valid extension of such time of filing and has filed any such SEC Documents prior to the expiration of any such extension. As of their respective dates, the SEC Documents complied in all material respects with the requirements of the Securities Act and the Exchange Act, as applicable. None of the SEC Documents, when filed, 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. The consolidated financial statements of the Company included or incorporated by reference in the Registration Statement and the Prospectus, together with the related notes and schedules, present fairly, in all material respects, the consolidated financial position of the Company as of the dates indicated and the consolidated results of operations, cash flows and changes in stockholders’ equity of the Company for the periods specified (subject to normal year-end adjustments) and have been prepared in compliance with the requirements of the Securities Act and Exchange Act, and in conformity with U.S. generally accepted accounting principles (“GAAP”) applied on a consistent basis during the periods involved; there are no financial statements (historical or pro forma) that are required to be included or incorporated by reference in the Registration Statement and the Prospectus that are not included or incorporated by reference as required; the Company does not have any material liabilities or obligations, direct or contingent (including any off-balance sheet obligations), not described in the Registration Statement and the Prospectus; and all disclosures contained or incorporated by reference in the Registration Statement and the Prospectus regarding “non-GAAP financial measures” (as such term is defined by the rules and regulations of the SEC) comply in all material respects with Regulation G of the Exchange Act and Item 10 of Regulation S-K under the Securities Act, to the extent applicable. The financial data set forth or incorporated by reference in the Registration Statement and the Prospectus fairly present the information set forth therein on a basis consistent with that of the audited financial statements contained or incorporated by reference in the Registration Statement and the Prospectus. The interactive data in eXtensible Business Reporting Language included or incorporated by reference in the Registration Statement and the Prospectus fairly presents the information called for in all material respects and has been prepared in accordance with the SEC’s rules and guidelines applicable thereto. The Company does not have pending before the SEC any request for confidential treatment of information. The SEC has not issued any stop order or other order suspending the effectiveness of any registration statement filed by the Company under the Exchange Act or the Securities Act.

(g) Absence of Certain Changes; Solvency. Except as otherwise stated therein, since the respective dates as of which information is given in the Registration Statement or the Prospectus, there has not been (i) any Material Adverse Effect or any event, circumstance, occurrence or development that could, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect, or (ii) any material adverse change in the business, properties, operations, financial condition or results of operations of the Company. The Company has not taken any steps, and does not currently expect to take 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 or insolvency proceedings involving the Company. The Company is financially solvent and is generally able to pay its debts as they become due.

(h) Absence of Litigation. Except as disclosed in the Registration Statement and the Prospectus, there are no actions, suits or proceedings by or before any Governmental Authority pending, or, to the Company’s knowledge, any audits or investigations by or before any Governmental Authority, to which the Company is a party or to which any property of the Company is the subject that, individually or in the aggregate, if determined adversely to the Company, would reasonably be expected to have a Material Adverse Effect and, to the Company’s knowledge, no such actions, suits, proceedings, audits or investigations are threatened or contemplated by any Governmental Authority or threatened by others. There are no current or pending audits, investigations, actions, suits or proceedings by or before any Governmental Authority that are required under the Securities Act to be described in the Registration Statement or the Prospectus that are not so described. “Governmental Authority” means (i) any federal, state, local, municipal, national or international government or governmental authority, regulatory or administrative agency, governmental commission, department, board, bureau, agency or instrumentality, court, tribunal, arbitrator or arbitral body (public or private); (ii) any self-regulatory organization (including any stock exchange or quotation system); or (iii) any political subdivision of any of the foregoing.

(i) Acknowledgment Regarding Investor's Status. The Company acknowledges and agrees that the Investor is acting solely in the capacity of arm's length purchaser with respect to the Transaction Documents and the transactions contemplated hereby and thereby. The Company further acknowledges that the Investor is not acting as a financial advisor or fiduciary of the Company (or in any similar capacity) with respect to the Transaction Documents and the transactions contemplated hereby and thereby and any advice given by the Investor or any of its representatives or agents in connection with the Transaction Documents and the transactions contemplated hereby and thereby is merely incidental to the Investor's purchase of the Securities. The Company further represents to the Investor 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 and advisors.

(j) No Integrated Offering. Neither the Company, nor any of its affiliates, nor any Person acting on its or their behalf has, directly or indirectly, made any offers or sales of any security or solicited any offers to buy any security, under circumstances that would cause this offering of the Securities to be integrated with prior offerings by the Company in a manner that would require stockholder approval pursuant to the rules of the Principal Market on which any of the securities of the Company are listed or designated. The issuance and sale of the Securities hereunder does not contravene the rules and regulations of the Principal Market.

(k) Intellectual Property Rights. Except as disclosed in the Registration Statement and the Prospectus, the Company owns or possesses adequate enforceable rights to use all patents, patent applications, trademarks (both registered and unregistered), trade names, trademark registrations, service marks, service mark registrations, Internet domain name registrations, copyrights, copyright registrations, licenses and know-how (including trade secrets and other unpatented and/or unpatentable proprietary or Confidential Information, systems or procedures) (collectively, the "Intellectual Property"), necessary for the conduct of their respective businesses as conducted as of the date hereof, except to the extent that the failure to own or possess adequate rights to use such Intellectual Property would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. The Company has not received any written notice of any claim of infringement or conflict which asserted Intellectual Property rights of others, which infringement or conflict, if the subject of an unfavorable decision, would reasonably be expected to result in a Material Adverse Effect. There are no pending, or to the Company's knowledge, threatened judicial proceedings or interference proceedings challenging the Company's rights in or to or the validity of the scope of any of the Company's patents, patent applications or proprietary information. To the Company's knowledge, no other entity or individual has any right or claim in any of the Company's patents, patent applications or any patent to be issued therefrom by virtue of any contract, license or other agreement entered into between such entity or individual and the Company or by any non-contractual obligation, other than by written licenses granted by the Company, except as would not, individually or in the aggregate, have a Material Adverse Effect. The Company has not received any written notice of any claim challenging the rights of the Company in or to any Intellectual Property owned, licensed or optioned by the Company which claim, if the subject of an unfavorable decision, would reasonably be expected to result in a Material Adverse Effect.

(l) Environmental Laws. Except as described in the Registration Statement and the Prospectus, the Company (i) is in compliance with any and all applicable foreign, federal, state and local laws and regulations relating to the protection of human health and safety, the environment or hazardous or toxic substances or wastes, pollutants or contaminants ("Environmental Laws"), (ii) has received all permits, licenses or other approvals required of them under applicable Environmental Laws to conduct their respective businesses and (iii) is in compliance with all terms and conditions of any such permit, license or approval, except where, in each of the three foregoing clauses, the failure to so comply could not reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect.

(m) Title. Except as set forth or incorporated by reference in the Registration Statement and the Prospectus, the Company has good and marketable title in fee simple to all real property owned by it and good and marketable title in all personal property owned by it that is material to the business of the Company, free and clear of all liens, encumbrances and defects (“Liens”) and, except for Liens as do not 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 and Liens for the payment of federal, state or other taxes, the payment of which is neither delinquent nor subject to penalties. Any real property and facilities held under lease by the Company is held by it under valid, subsisting and enforceable leases with which the Company is in compliance with such exceptions as are not material and do not interfere with the use made and proposed to be made of such property and buildings by the Company.

(n) Insurance. The Company is insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as management of the Company believes to be prudent and customary in the businesses in which the Company is engaged. The Company has not been refused any insurance coverage sought or applied for and the Company has no reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business at a cost that would not materially and adversely affect the condition, financial or otherwise, or the earnings, business or operations of the Company.

(o) Regulatory Permits. The Company possesses all licenses, certificates, registrations, authorizations and permits required by applicable Governmental Authorities and have made all declarations and filings with, the appropriate Governmental Authorities that are necessary for the ownership or lease of their respective properties or the conduct of their respective businesses as described in the Registration Statement and the Prospectus (collectively, the “Material Permits”), except where any failures to possess or make the same would not, singularly or in the aggregate, have a Material Adverse Effect. All such Material Permits are valid and in full force and effect, except where the validity or failure to be in full force and effect would not, singularly or in the aggregate, have a Material Adverse Effect. The Company has not received notification of any revocation, modification, suspension, termination or invalidation (or proceedings related thereto) of any such Material Permit and the Company has no reason to believe that any such Material Permit will not be renewed.

(p) Tax Status. The Company has filed all federal, state, local and foreign tax returns which have been required to be filed and paid all taxes shown thereon through the date hereof, to the extent that such taxes have become due and are not being contested in good faith, except where the failure to so file or pay would not reasonably be expected to have a Material Adverse Effect. Except as otherwise disclosed in or contemplated by the Registration Statement and the Prospectus, no tax deficiency has been determined adversely to the Company which has had, or would reasonably be expected to have, individually or in the aggregate, a Material Adverse Effect. The Company has no knowledge of any federal, state, or other governmental tax deficiency, penalty or assessment which has been or might be asserted or threatened against it which would reasonably be expected to have a Material Adverse Effect.

(q) Transactions With Affiliates. Except as set forth in the Registration Statement, the Prospectus, and the Company’s Quarterly Report on 10-Q for the quarter ended June 30, 2023, none of the officers or directors of the Company and, to the knowledge of the Company, none of the employees of the Company is presently a party to any transaction with the Company (other than for services as employees, officers and directors), including any contract, agreement or other arrangement providing for the furnishing of services to or by, providing for rental of real or personal property to or from, or otherwise requiring payments to or from any officer, director or such employee or, to the knowledge of the Company, any entity in which any officer, director, or any such employee has a substantial interest or is an officer, director, trustee or partner, in each case in excess of \$120,000 other than for (i) payment of salary or consulting fees for services rendered, (ii) reimbursement for expenses incurred on behalf of the Company and (iii) other employee benefits, including stock option agreements under any stock option plan of the Company.

(r) Application of Takeover Protections. The Company and its board of directors have taken or will take prior to the Commencement Date all necessary action, if any, in order to render inapplicable any control share acquisition, business combination, poison pill (including any distribution under a rights agreement) or other similar anti-takeover provision under the Certificate of Incorporation or the laws of the State of Delaware which is or could become applicable to the Investor as a result of the transactions contemplated by this Agreement, including, without limitation, the Company's issuance of the Securities and the Investor's ownership of the Securities.

(s) Disclosure. Except with respect to the material terms and conditions of the transactions contemplated by the Transaction Documents that will be timely publicly disclosed by the Company, the Company confirms that neither it nor any other Person acting on its behalf has provided the Investor or its agents or counsel with any information that it believes constitutes or might constitute material, non-public information which is not otherwise disclosed in the Registration Statement and the Prospectus. The Company understands and confirms that the Investor will rely on the foregoing representation in effecting purchases and sales of securities of the Company. All of the disclosure furnished by or on behalf of the Company to the Investor regarding the Company, its business and the transactions contemplated hereby, including the disclosure schedules to this Agreement, 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 light of the circumstances under which they were made, not misleading. The Company acknowledges and agrees that the Investor neither makes nor has made any representations or warranties with respect to the transactions contemplated hereby other than those specifically set forth in Section 3 hereof.

(t) No Improper Practices. (i) Neither the Company nor, to the Company's knowledge, any of its respective executive officers, directors or employees has, in the past five years, made any unlawful contributions to any candidate for any political office (or failed fully to disclose any contribution in violation of law) or made any contribution or other payment to any official of, or candidate for, any federal, state, municipal, or foreign office or other person charged with similar public or quasi-public duty in violation of any law or of the character required to be disclosed in the Prospectus; (ii) no relationship, direct or indirect, exists between or among the Company or, to the Company's knowledge, any affiliate of any of them, on the one hand, and the directors, officers and stockholders of the Company or, to the Company's knowledge, on the other hand, that is required by the Securities Act to be described in the Registration Statement and the Prospectus that is not so described; (iii) no relationship, direct or indirect, exists between or among the Company or any affiliate of it, on the one hand, and the directors, officers, stockholders or directors of the Company or, to the Company's knowledge, on the other hand, that is required by the rules of the Financial Industry Regulatory Authority, Inc. ("FINRA") to be described in the Registration Statement and the Prospectus that is not so described; (iv) there are no material outstanding loans or advances or material guarantees of indebtedness by the Company to or for the benefit of any of its officers or directors or any of the members of the families of any of them; and (v) the Company has not offered, or caused any placement agent to offer, Common Stock to any person with the intent to influence unlawfully (A) a customer or supplier of the Company to alter the customer's or supplier's level or type of business with the Company or (B) a trade journalist or publication to write or publish favorable information about the Company or any of its respective products or services, and, (vi) no employee or agent of the Company has made any payment of funds of the Company or received or retained any funds in violation of any law, rule or regulation (including, without limitation, the Foreign Corrupt Practices Act of 1977), which payment, receipt or retention of funds is of a character required to be disclosed in the Registration Statement or the Prospectus.

(u) Registration Statement. The Company has prepared and filed the Registration Statement with the SEC in accordance with the Securities Act. The Registration Statement was declared effective by order of the SEC on February 12, 2021. The Registration Statement is effective pursuant to the Securities Act and available for the issuance of the Securities thereunder, and the Company has not received any written notice that the SEC has issued or intends to issue a stop order or other similar order with respect to the Registration Statement or the Prospectus or that the SEC otherwise has (i) suspended or withdrawn the effectiveness of the Registration Statement or (ii) issued any order preventing or suspending the use of the Prospectus or any Prospectus Supplement, in either case, either temporarily or permanently or intends or has threatened in writing to do so. The “Plan of Distribution” section of the Prospectus permits the issuance of the Securities under the terms of this Agreement. At the time the Registration Statement and any amendments thereto became effective, at the date of this Agreement and at each deemed effective date thereof pursuant to Rule 430B(f)(2) of the Securities Act, the Registration Statement and any amendments thereto complied and will comply in all material respects with the requirements of the Securities Act and did not and 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 not misleading; and the Base Prospectus and any Prospectus Supplement thereto, at the time such Base Prospectus or such Prospectus Supplement thereto was issued and on the Commencement Date, complied and will comply in all material respects with the requirements of the Securities Act and did not and will not contain an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading; provided that this representation and warranty does not apply to statements in or omissions from any Prospectus Supplement made in reliance upon and in conformity with information relating to the Investor furnished to the Company in writing by or on behalf of the Investor expressly for use therein. The Company meets all of the requirements for the use of a registration statement on Form S-3 pursuant to the Securities Act for the offering and sale of the Securities contemplated by this Agreement in reliance on General Instruction I.B.1 of Form S-3, and the SEC has not notified the Company of any objection to the use of the form of the Registration Statement pursuant to Rule 401(g)(1) of the Securities Act. The Company hereby confirms that the issuance of the Securities to the Investor pursuant to this Agreement would not result in non-compliance with the Securities Act or any of the General Instructions to Form S-3. The Registration Statement, as of its effective date, meets the requirements set forth in Rule 415(a)(1)(x) pursuant to the Securities Act. At the earliest time after the filing of the Registration Statement that the Company or another offering participant made a bona fide offer (within the meaning of Rule 164(h)(2) of the Securities Act) relating to any of the Securities, the Company was not, and as of the date of this Agreement the Company is not, an Ineligible Issuer (as defined in Rule 405 of the Securities Act). The Company has not distributed any offering material in connection with the offering and sale of any of the Securities, and, until the Investor does not hold any of the Securities, shall not distribute any offering material in connection with the offering and sale of any of the Securities, to or by the Investor, in each case, other than the Registration Statement or any amendment thereto, the Prospectus or any Prospectus Supplement required pursuant to applicable law or the Transaction Documents. The Company has not made and shall not make an offer relating to the Securities that would constitute a “free writing prospectus” as defined in Rule 405 under the Securities Act.

(v) DTC Eligibility. The Company, through the Transfer Agent, currently participates in the DTC Fast Automated Securities Transfer (FAST) Program and the Common Stock can be transferred electronically to third parties via the DTC Fast Automated Securities Transfer (FAST) Program.

(w) Sarbanes-Oxley. 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 with any applicable provisions of the Sarbanes-Oxley Act of 2002 (as amended, the “Sarbanes-Oxley Act”) and the rules and regulations promulgated thereunder. Each of the principal executive officer and the principal financial officer of the Company (or each former principal executive officer of the Company and each former principal financial officer of the Company as applicable) has made all certifications required by Sections 302 and 906 of the Sarbanes-Oxley Act with respect to all reports, schedules, forms, statements and other documents required to be filed by it or furnished by it to the SEC. For purposes of the preceding sentence, “principal executive officer” and “principal financial officer” shall have the meanings given to such terms in the Sarbanes-Oxley Act.

(x) Certain Fees. No brokerage or finder's fees or commissions are or will be payable by the Company to any broker, financial advisor or consultant, finder, placement agent, investment banker, bank or other Person with respect to the transactions contemplated by the Transaction Documents. The Investor 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 4(x) that may be due in connection with the transactions contemplated by the Transaction Documents.

(y) Investment Company. 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 and the Prospectus will not be required, to register as an "investment company" under the Investment Company Act of 1940, as amended.

(z) Listing and Maintenance Requirements. The Common Stock is registered pursuant to Section 12(b) of the Exchange Act, and the Company has taken no action designed to, or which to its knowledge is likely to have the effect of, terminating the registration of the Common Stock pursuant to the Exchange Act nor has the Company received any notification that the SEC is currently contemplating terminating such registration. Except as disclosed in the Registration Statement and the Prospectus, the Company has not, in the twelve (12) months preceding the date hereof, received any notice from any Person to the effect that the Company is not in compliance with the listing or maintenance requirements of the Principal Market. The Company is, and has no reason to believe that it will not in the foreseeable future continue to be, in compliance with all such listing and maintenance requirements. To the Company's knowledge, the Principal Market has not commenced any delisting proceedings against the Company.

(aa) Accountants. Ernst & Young LLP (the "Accountant"), whose report on the consolidated financial statements of the Company is incorporated by reference in the Registration Statement and the Prospectus, is and, during the periods covered by its report, was an independent registered public accounting firm as required by the Securities Act, the Exchange Act, and the rules of the Public Company Accounting Oversight Board. To the Company's knowledge, the Accountant is in compliance with the applicable requirements relating to the qualification of accountants under Rule 2-01 of Regulation S-X under the Securities Act.

(bb) No Market Manipulation. The Company has not, and to its knowledge no Person acting on its behalf has, (i) taken, directly or indirectly, any action designed to cause or to result in the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of any of the Securities, (ii) sold, bid for, purchased, or, paid any compensation for soliciting purchases of, any of the Securities, or (iii) paid or agreed to pay to any Person any compensation for soliciting another to purchase any other securities of the Company.

(cc) Money Laundering. The operations of the Company are and have been conducted at all times in compliance with applicable financial record keeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the money laundering statutes of all jurisdictions to which the Company is subject, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any governmental agency having jurisdiction over the Company (collectively, the "Money Laundering Laws"), except where the failure to be in such compliance would not reasonably be expected to result in a Material Adverse Effect; and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company with respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

(dd) OFAC.

(i) Neither the Company nor, to the Company's knowledge, any director, officer, employee, agent, affiliate or representative of the Entity, is a government, individual, or entity (in this paragraph (uu), "Person") that is, or is owned or controlled by a Person that is:

(a) the subject of any sanctions administered or enforced by the U.S. Department of Treasury's Office of Foreign Assets Control ("OFAC"), the United Nations Security Council ("UNSC"), the European Union ("EU"), His Majesty's Treasury ("HMT"), or other relevant sanctions authority (collectively, "Sanctions"), nor

(b) located, organized or resident in a country or territory that is the subject of Sanctions.

(ii) The Company will not, directly or indirectly, use the proceeds of the offering, or lend, contribute or otherwise make available such proceeds to any joint venture partner or other Person:

(a) to fund or facilitate any activities or business of or with any Person or in any country or territory that, at the time of such funding or facilitation, is the subject of Sanctions; or

(b) in any other manner that will result in a violation of Sanctions by any Person (including any Person participating in the offering, whether as underwriter, advisor, investor or otherwise).

(iii) The Company represents and covenants that, except as detailed in the Registration Statement and the Prospectus, for the past 5 years, it has not engaged in and is 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.

(ee) FDA. As to each product subject to the jurisdiction of the U.S. Food and Drug Administration ("FDA") under the Federal Food, Drug and Cosmetic Act, as amended, and the regulations thereunder ("FDCA") that is manufactured, packaged, labeled, tested, distributed, sold, and/or marketed by the Company (each such product, a "Pharmaceutical Product"), such Pharmaceutical Product is being manufactured, packaged, labeled, tested, distributed, sold and/or marketed by the Company in compliance with all applicable requirements under FDCA and similar laws, rules and regulations relating to registration, investigational use, premarket clearance, licensure, or application approval, good manufacturing practices, good laboratory practices, good clinical practices, product listing, quotas, labeling, advertising, record keeping and filing of reports, except where the failure to be in compliance would not have a Material Adverse Effect. There is no pending, completed or, to the Company's knowledge, threatened, action (including any lawsuit, arbitration, or legal or administrative or regulatory proceeding, charge, complaint, or investigation) against the Company, and the Company has not received any notice, warning letter or other communication from the FDA or any other governmental entity, which (i) contests the premarket clearance, licensure, registration, or approval of, the uses of, the distribution of, the manufacturing or packaging of, the testing of, the sale of, or the labeling and promotion of any Pharmaceutical Product, (ii) withdraws its approval of, requests the recall, suspension, or seizure of, or withdraws or orders the withdrawal of advertising or sales promotional materials relating to, any Pharmaceutical Product, (iii) imposes a clinical hold on any clinical investigation by the Company, (iv) enjoins production at any facility of the Company, (v) enters or proposes to enter into a consent decree of permanent injunction with the Company, or (vi) otherwise alleges any violation of any laws, rules or regulations by the Company, and which, either individually or in the aggregate, would have a Material Adverse Effect. The properties, business and operations of the Company have been and are being conducted in all material respects in accordance with all applicable laws, rules and regulations of the FDA. The Company has not been informed by the FDA that the FDA will prohibit the marketing, sale, license or use in the United States of any product proposed to be developed, produced or marketed by the Company nor has the FDA expressed any concern as to approving or clearing for marketing any product being developed or proposed to be developed by the Company.

(ff) IT Systems and Data. (i)(x) To the knowledge of Company, there has been no security breach or other compromise of any of the Company's information technology and computer systems, networks, hardware, software, data (including the data of their respective customers, employees, suppliers, vendors and any third party data maintained by or on behalf of them), equipment or technology (collectively, "IT Systems and Data") and (y) the Company has not been notified of, and has no knowledge of any event or condition that would reasonably be expected to result in, any security breach or other compromise to the IT Systems and Data, except as would not, in the case of this clause (i), individually or in the aggregate, have a Material Adverse Effect; (ii) the Company is presently in material compliance with all applicable laws or statutes and all judgments, orders, rules and regulations of any court or arbitrator or governmental or regulatory authority, internal policies and contractual obligations relating to the privacy and security of IT Systems and Data and to the protection of such IT Systems and Data from unauthorized use, access, misappropriation or modification, except as would not, in the case of this clause (ii), individually or in the aggregate, have a Material Adverse Effect; and (iii) the Company has implemented backup and disaster recovery technology consistent with industry standards and practices.

(gg) Compliance with Data Privacy Laws. The Company is, and at all prior times were, in material compliance with all applicable state and federal data privacy and security laws and regulations, including without limitation HIPAA, CCPA, and the European Union General Data Protection Regulation (EU 2016/679) (collectively, the "Privacy Laws"). To ensure compliance with the Privacy Laws, the Company has in place, complies with, and takes appropriate steps to ensure compliance in all material respects with their policies and procedures relating to data privacy and security and the collection, storage, use, processing, disclosure, handling, and analysis of personal data and confidential data (the "Policies"). The Company has at all times made all disclosures to users or customers required by applicable laws and regulatory rules or requirements, and none of such disclosures made or contained in any Policy have been inaccurate or in violation of any applicable laws and regulatory rules or requirements in any material respect. The Company further certifies that it: (i) has not received notice of any actual or potential liability under or relating to, or actual or potential violation of, any of the Privacy Laws, and has no knowledge of any event or condition that would reasonably be expected to result in any such notice; (ii) is not currently conducting or paying for, in whole or in part, any investigation, remediation, or other corrective action pursuant to any Privacy Law; or (iii) is not a party to any order, decree, or agreement that imposes any obligation or liability under any Privacy Law.

(hh) Labor Relations. No labor dispute exists or, to the knowledge of the Company, is imminent with respect to any of the employees of the Company, which could reasonably be expected to result in a Material Adverse Effect. None of the Company's employees is a member of a union that relates to such employee's relationship with the Company, and the Company is not a party to a collective bargaining agreement, and the Company believe that their relationships with its employees are good. To the knowledge of the Company, no executive officer of the Company, 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 the continued employment of each such executive officer does not subject the Company to any liability with respect to any of the foregoing matters. 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 could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

(ii) Stock Option Plans. Each stock option granted by the Company under the Company's stock option plan was granted (i) in accordance with the terms of the Company's stock option plan and (ii) with an exercise price at least equal to the fair market value of the Common Stock on the date such stock option would be considered granted under GAAP and applicable law. No stock option granted under the Company's stock option plan has been backdated. The Company has not knowingly granted, and there is no and has been no Company policy or practice to knowingly grant, stock options prior to, or otherwise knowingly coordinate the grant of stock options with, the release or other public announcement of material information regarding the Company or its financial results or prospects.

(jj) Accounting Controls. The Company maintains a system of internal control over financial reporting (as defined under Rule 13a-15 and 15d-15 under the Exchange Act) and a system of internal accounting controls designed to provide reasonable assurances (A) regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP; (B) that records are maintained that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the Company; (C) that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; (D) regarding the prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that would reasonably be expected to have a material effect on the financial statements; and (E) the interactive data in eXtensible Business Reporting Language incorporated by reference in the Registration Statement fairly presents the information called for in all material respects and is prepared in accordance with the SEC's rules and guidelines applicable thereto. Except as described in the Registration Statement and the Prospectus, since the end of each of the Company's most recent audited fiscal year, there has been (1) no material weakness or significant deficiency 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 and adversely affected, or is reasonably likely to materially and adversely affect, the Company's internal control over financial reporting.

(kk) Disclosure Controls. The Company has established and maintains disclosure controls and procedures (as defined in Rules 13a-15 and 15d-15 under the Exchange Act) designed to provide reasonable assurance that material information relating to the Company is recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms and to ensure that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the Company's management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure, and except as described in the Registration Statement and the Prospectus, such disclosure controls and procedures were effective as of the last date of the most recent fiscal quarter for which the Company has filed a quarterly or annual report with the Commission. The Company has utilized such controls and procedures in preparing and evaluating the disclosures in the Registration Statement and in the Prospectus. The Company is not aware of any fraud, whether or not material, that involves management or other employees who have a significant role in the Company's internal control over financial reporting.

(ll) Material Agreements. There are no contracts, agreements, instruments or other documents that are required to be described or incorporated by reference in the Registration Statement or the Prospectus or to be filed or incorporated by reference as an exhibit to the Registration Statement or any SEC Document incorporated by reference in the Registration Statement or the Prospectus which have not been so described in all material respects and filed as required by Item 601(b) of Regulation S-K under the Securities Act. All contracts and agreements between the Company, on the one hand, and any one or more third parties, on the other hand, expressly referenced in the Registration Statement or the Prospectus or any SEC Document incorporated by reference in the Registration Statement or the Prospectus are legal, valid and binding obligations of the Company, enforceable against the Company (as applicable) and, to the knowledge of the Company, all third parties that are party thereto, in accordance with their respective terms, except as rights to indemnity thereunder (as applicable) may be limited by federal or state securities laws and except as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting the rights of creditors generally, and subject to general principles of equity.

(mm) Shell Company Status. The Company is not a shell company (as defined in Rule 405 under the Securities Act) and has not been a shell company for at least 12 calendar months previously and if it has been a shell company at any time previously, has filed current Form 10 information (as defined in General Instruction I.B.6 of Form S-3) with the Commission at least 12 calendar months previously reflecting its status as an entity that is not a shell company.

(nn) Smaller Reporting Company Status. As of the date hereof, the Company was a “smaller reporting company” as defined in Rule 12b-2 of the Exchange Act.

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

(pp) Forward-Looking Statements. No forward-looking statement (within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act) contained or incorporated by reference in the Registration Statement or the Prospectus has been made without a reasonable basis or has been disclosed other than in good faith.

5. COVENANTS.

(a) Filing of Current Report and Initial Prospectus Supplement. The Company agrees that it shall, on the date hereof, file with the SEC a current report on Form 8-K relating to the transactions contemplated by, and describing the material terms and conditions of, the Transaction Documents in the form agreed upon by the Investor prior to the date hereof (the “Current Report”). The Company further agrees that it shall, on the date hereof, file with the SEC the Initial Prospectus Supplement pursuant to Rule 424(b) under the Securities Act, in the form agreed upon by the Investor prior to such filing, specifically relating to the transactions contemplated by, and describing the material terms and conditions of, the Transaction Documents, containing information previously omitted at the time of effectiveness of the Registration Statement in reliance on Rule 430B under the Securities Act, and disclosing all information relating to the transactions contemplated hereby required to be disclosed in the Registration Statement and the Prospectus as of the date of the Initial Prospectus Supplement, including, without limitation, information required to be disclosed in the section captioned “Plan of Distribution” in the Prospectus, pursuant to and in accordance with the terms of the Registration Rights Agreement.

(b) Blue Sky. The Company shall take all such action, if any, as is reasonably necessary in order to obtain an exemption for or to register or qualify (i) the issuance of the Commitment Shares and the issuance and sale of the Purchase Shares to the Investor under this Agreement and (ii) any subsequent resale of the Securities by the Investor, in each case, under applicable securities or “Blue Sky” laws of the states of the United States in such states as is reasonably requested by the Investor from time to time, and shall provide evidence of any such action so taken to the Investor.

(c) Listing/DTC. The Company shall promptly secure the listing of all of the Securities to be issued to the Investor under this Agreement on the Principal Market (subject to official notice of issuance) and upon each other national securities exchange or automated quotation system, if any, upon which the Common Stock is then listed, and shall use commercially reasonable efforts to maintain, so long as any shares of Common Stock shall be so listed, such listing of all such Securities. The Company shall use commercially reasonable efforts to maintain the listing of the Common Stock, including the Securities, on the Principal Market and shall comply in all respects with the Company's reporting, filing and other obligations under the bylaws or rules and regulations of the Principal Market. The Company shall not take any action that would reasonably be expected to result in the delisting or suspension of the Common Stock, including the Securities, on the Principal Market. The Company shall promptly, and in no event later than the following Business Day, provide to the Investor copies of any notices it receives from the Principal Market regarding the continued eligibility of the Common Stock for listing on the Principal Market; provided, however, that the Company shall not be required to provide the Investor copies of any such notice that the Company reasonably believes constitutes material non-public information and the Company would not be required to publicly disclose such notice in any report or statement filed with the SEC under the Exchange Act (including on Form 8-K) or the Securities Act. The Company shall pay all fees and expenses in connection with satisfying its obligations under this Section 5(c). The Company shall take all commercially reasonable action necessary to ensure that its Common Stock, including the Securities, can be transferred electronically as DWAC Shares.

(d) Prohibition of Short Sales and Hedging Transactions The Investor agrees that beginning on the date of this Agreement and ending on the date of termination of this Agreement as provided in Section 11, the Investor and its agents, representatives and affiliates shall not in any manner whatsoever enter into or effect, directly or indirectly, any (i) "short sale" (as such term is defined in Rule 200 of Regulation SHO of the Exchange Act) of the Common Stock or (ii) hedging transaction, which establishes a net short position with respect to the Common Stock.

(e) Issuance of Commitment Shares. In consideration for the Investor's execution and delivery of this Agreement, the Company shall cause to be issued to the Investor a total of 246,792 shares of Common Stock (the "Commitment Shares") not later than the close of business on the next Business Day immediately following the date of this Agreement and shall, concurrently with the execution of this Agreement on the date hereof, deliver to the Transfer Agent the Irrevocable Transfer Agent Instructions with respect to the issuance of such Commitment Shares to the Investor within such time period. For the avoidance of doubt, all of the Commitment Shares shall be fully earned as of the date of this Agreement, whether or not the Commencement shall occur or any Purchase Shares are purchased by the Investor under this Agreement and irrespective of any subsequent termination of this Agreement.

(f) Due Diligence; Non-Public Information. The Investor shall have the right, from time to time as the Investor may reasonably deem appropriate, and upon providing reasonable advance notice to the Company, to perform reasonable due diligence on the Company during normal business hours. The Company and its officers and employees shall provide information and reasonably cooperate with the Investor in connection with any reasonable request by the Investor related to the Investor's due diligence of the Company. Each party hereto agrees not to disclose any Confidential Information of the other party to any third party and shall not use the Confidential Information for any purpose other than in connection with, or in furtherance of, the transactions contemplated hereby. Each party hereto acknowledges that the Confidential Information shall remain the property of the disclosing party and agrees that it shall take all reasonable measures to protect the secrecy of any Confidential Information disclosed by the other party. The Company confirms that neither it nor any other Person acting on its behalf shall provide the Investor or its agents or counsel with any information that constitutes or might constitute material, non-public information, unless a simultaneous public announcement thereof is made by the Company in the manner contemplated by Regulation FD. In the event of a breach of the foregoing covenant by the Company or any Person acting on its behalf (as determined in the reasonable good faith judgment of the Investor), in addition to any other remedy provided herein or in the other Transaction Documents, if the Investor is holding any Securities at the time of the disclosure of material, non-public information, the Investor shall have the right to make a public disclosure, in the form of a press release, public advertisement, or otherwise, of such material, non-public information without the prior approval by the Company; provided the Investor shall have first provided notice to the Company that it believes it has received information that constitutes material, non-public information, the Company shall have at least twenty-four (24) hours to publicly disclose such material, non-public information prior to any such disclosure by the Investor, the Company shall have failed to demonstrate to the Investor in writing within such time period that such information does not constitute material, non-public information, and the Company shall have failed to publicly disclose such material, non-public information within such time period. The Investor shall not have any liability to the Company or any of its respective directors, officers, employees, stockholders, or agents, for any such disclosure. The Company understands and confirms that the Investor shall be relying on the foregoing covenants in effecting transactions in securities of the Company.

(g) Purchase Records. The Investor and the Company shall each maintain records showing the remaining Available Amount at any given time and the dates and Purchase Amounts for each Regular Purchase, Accelerated Purchase and Additional Accelerated Purchase or shall use such other method, reasonably satisfactory to the Investor and the Company.

(h) Taxes. The Company shall pay any and all transfer, stamp or similar taxes that may be payable with respect to the issuance and delivery of any shares of Common Stock to the Investor made under this Agreement.

(i) Use of Proceeds. The Company will use the net proceeds from the offering as described in the Prospectus.

(j) Other Transactions. The Company shall not enter into, announce or recommend to its stockholders any agreement, plan, arrangement or transaction in or of which the terms thereof would restrict, materially delay, conflict with or impair the ability or right of the Company to perform its obligations under the Transaction Documents, including, without limitation, the obligation of the Company to deliver the Securities to the Investor in accordance with the terms of the Transaction Documents.

(k) No Aggregation. From and after the date of this Agreement, neither the Company, nor or any of its affiliates will, and the Company shall use its commercially reasonable efforts to ensure that no Person acting on their behalf will, directly or indirectly, make any offers or sales of any security or solicit any offers to buy any security, under circumstances that would reasonably be expected to cause this offering of the Securities by the Company to the Investor to be aggregated with other offerings by the Company in a manner that would require stockholder approval pursuant to the rules of the Principal Market on which any of the securities of the Company are listed or designated unless stockholder approval is obtained before the closing of such subsequent transaction in accordance with the rules of such Principal Market.

(l) Limitation on Variable Rate Transactions. From and after the date of this Agreement until the 30-month anniversary of the Commencement Date, irrespective of any earlier termination of this Agreement, the Company shall be prohibited from effecting or entering into an agreement to effect any issuance by the Company of Common Stock or Common Stock Equivalents (or any combination of units thereof) in any “equity line of credit”, “at-the-market offering” or other similar continuous offering in which the Company may offer, issue or sell Common Stock or Common Stock Equivalents (or any combination of units thereof) at a future determined price, other than in connection with an Exempt Issuance. The Investor shall be entitled to seek injunctive relief against the Company to preclude any such issuance, which remedy shall be in addition to any right to collect damages, without the necessity of showing economic loss and without any bond or other security being required. “Common Stock Equivalents” means any securities of the Company which entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, rights, options, warrants or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock. “Exempt Issuance” means the issuance of (a) any Securities issued to the Investor pursuant to this Agreement, and any Common Stock and Common Stock Equivalents issued to the Investor or any affiliate of the Investor pursuant to any other agreement or arrangement between the Company, on the one hand, and the Investor or any of its affiliates, on the other hand, if any, (b) any securities issued upon the exercise or exchange of or conversion of any shares of Common Stock or Common Stock Equivalents owned or held, directly or indirectly, by the Investor or any of its affiliates or designees at any time, (c) any securities, including, without limitation, Common Stock or Common Stock Equivalents (or any combination of units thereof), issuable to the Investor or any of its affiliates or designees pursuant to any other agreement or arrangement between the Investor or any of its affiliates or designees, on the one hand, and the Company, on the other hand, entered into after the date of this Agreement, if any, or (d) shares of Common Stock issued pursuant to an “at-the-market offering” under Rule 415(a)(4) under the Securities Act by the Company exclusively through one or more registered broker-dealer(s) acting as agent(s) of the Company pursuant to a written agreement between the Company and such registered broker-dealer(s) only, including pursuant to the current “at-the-market offering” with JonesTrading Institutional Services LLC pursuant to the Capital on Demand™ Sales Agreement dated March 11, 2021.

6. TRANSFER AGENT INSTRUCTIONS.

On the date of this Agreement, the Company shall issue to the Transfer Agent (and any subsequent transfer agent) irrevocable instructions, in the form substantially similar to those used by the Investor in substantially similar transactions, to issue the Purchase Shares and the Commitment Shares in accordance with the terms of this Agreement (the “Irrevocable Transfer Agent Instructions”). All Securities to be issued to or for the benefit of the Investor pursuant to this Agreement shall be issued as DWAC Shares. The Company represents and warrants to the Investor that no instruction other than the Irrevocable Transfer Agent Instructions referred to in this Section 6 will be given by the Company to the Transfer Agent with respect to the Securities, except as may otherwise be as mutually agreed by the Company and the Investor, and the Securities shall otherwise be freely transferable on the books and records of the Company. If the Investor effects a sale, assignment or transfer of the Purchase Shares or the Commitment Shares, the Company shall permit the transfer and shall promptly instruct the Transfer Agent (and any subsequent transfer agent) to issue DWAC Shares in such name and in such denominations as specified by the Investor to effect such sale, transfer or assignment. The Company shall take all actions to carry out the intent and accomplish the purposes of this Section 6, including, without limitation, delivering or causing to be delivered all such legal opinions, consents, certificates, resolutions and instructions to the Transfer Agent, and any successor transfer agent of the Company, as may be requested from time to time by the Investor or necessary or desirable to carry out the intent and accomplish the purposes of this Section 6, and all fees and costs associated therewith shall be borne by the Company.

7. CONDITIONS TO THE COMPANY’S RIGHT TO COMMENCE SALES OF SHARES OF COMMON STOCK.

The right of the Company hereunder to commence sales of the Purchase Shares on the Commencement Date is subject to the satisfaction or, where legally permissible, the waiver of each of the following conditions:

- (a) The Investor shall have executed each of the Transaction Documents and delivered the same to the Company;
- (b) No stop order with respect to the Registration Statement shall be pending or threatened by the SEC; and
- (c) The representations and warranties of the Investor shall be true and correct in all material respects as of the date hereof and as of the Commencement Date as though made at that time.

8. CONDITIONS TO THE INVESTOR'S OBLIGATION TO PURCHASE SHARES OF COMMON STOCK.

The obligation of the Investor to buy Purchase Shares under this Agreement is subject to the satisfaction or, where legally permissible, the waiver of each of the following conditions on or prior to the Commencement Date and, once such conditions have been initially satisfied, there shall not be any ongoing obligation to satisfy such conditions after the Commencement has occurred:

- (a) The Company shall have executed each of the Transaction Documents and delivered the same to the Investor;
- (b) The Common Stock shall be listed or quoted on the Principal Market, trading in the Common Stock shall not have been within the last 365 days suspended by the SEC or the Principal Market, and all Securities to be issued by the Company to the Investor pursuant to this Agreement shall have been approved for listing or quotation on the Principal Market in accordance with the applicable rules and regulations of the Principal Market, subject only to official notice of issuance;
- (c) The Investor shall have received the opinions and negative assurances of the Company's legal counsel dated as of the Commencement Date substantially in the form heretofore agreed by the parties hereto;
- (d) The representations and warranties of the Company shall be true and correct in all material respects (except to the extent that any of such representations and warranties is already qualified as to materiality in Section 4 above, in which case, the portion of such representations and warranties so qualified shall be true and correct without further qualification) as of the date hereof and as of the Commencement Date as though made at that time (except for representations and warranties that speak as of a specific date, which shall be true and correct as of such date) and the Company shall have performed, satisfied and complied with the covenants, agreements and conditions required by the Transaction Documents to be performed, satisfied or complied with by the Company at or prior to the Commencement Date. The Investor shall have received a certificate, executed by the CEO, President or CFO of the Company, dated as of the Commencement Date, to the foregoing effect in the form attached hereto as **Exhibit A**;
- (e) The Board of Directors of the Company shall have adopted resolutions substantially in the form attached hereto as **Exhibit B**, which shall be in full force and effect without any amendment or supplement thereto as of the Commencement Date;
- (f) As of the Commencement Date, the Company shall have reserved out of its authorized and unissued Common Stock, solely for the purpose of effecting purchases of Purchase Shares hereunder, 14,285,714 shares of Common Stock;
- (g) The Irrevocable Transfer Agent Instructions shall have been delivered to and acknowledged in writing by the Company and the Company's Transfer Agent, and the Commitment Shares required to have been issued on the Commencement Date in accordance with Section 5(e) hereof shall have been issued directly to the Investor electronically as DWAC Shares;

(h) The Company shall have delivered to the Investor a certificate evidencing the incorporation and good standing of the Company in the State of Delaware issued by the Secretary of State of the State of Delaware as of a date within ten (10) Business Days of the Commencement Date;

(i) The Company shall have delivered to the Investor a certified copy of the Certificate of Incorporation as certified by the Secretary of State of the State of Delaware within ten (10) Business Days of the Commencement Date;

(j) The Company shall have delivered to the Investor a secretary's certificate executed by the Secretary of the Company, dated as of the Commencement Date, in the form attached hereto as **Exhibit C**;

(k) The Registration Statement shall continue to be effective and no stop order with respect to the Registration Statement shall be pending or threatened by the SEC. The Company shall have a maximum dollar amount certain of Common Stock registered under the Registration Statement which is sufficient to issue to the Investor not less than (i) the full Available Amount worth of Purchase Shares plus (ii) all of the Commitment Shares. The Current Report and the Initial Prospectus Supplement each shall have been filed with the SEC, as required pursuant to Section 5(a) and in compliance with Registration Rights Agreement, and copies of the Prospectus shall have been delivered to the Investor in accordance with Registration Rights Agreement. The Prospectus shall be current and available for issuances and sales of all of the Securities by the Company to the Investor, and for the resale of all of the Securities by the Investor. Any other Prospectus Supplements required to have been filed by the Company with the SEC under the Securities Act at or prior to the Commencement Date shall have been filed with the SEC within the applicable time periods prescribed for such filings under the Securities Act. All reports, schedules, registrations, forms, statements, information and other documents required to have been filed by the Company with the SEC at or prior to the Commencement Date pursuant to the reporting requirements of the Exchange Act shall have been filed with the SEC within the applicable time periods prescribed for such filings under the Exchange Act;

(l) No Suspension Event has occurred, or any event which, after notice and/or lapse of time, would become a Suspension Event has occurred;

(m) All federal, state and local governmental laws, rules and regulations applicable to the transactions contemplated by the Transaction Documents and necessary for the execution, delivery and performance of the Transaction Documents and the consummation of the transactions contemplated thereby in accordance with the terms thereof shall have been complied with, and all consents, authorizations and orders of, and all filings and registrations with, all Governmental Authorities necessary for the execution, delivery and performance of the Transaction Documents and the consummation of the transactions contemplated thereby in accordance with the terms thereof shall have been obtained or made, including, without limitation, in each case those required under the Securities Act, the Exchange Act, applicable state securities or "Blue Sky" laws or applicable rules and regulations of the Principal Market, or otherwise required by the SEC, the Principal Market or any state securities regulators;

(n) No statute, regulation, order, decree, writ, ruling or injunction shall have been enacted, entered, promulgated, threatened or endorsed by any Governmental Authority of competent jurisdiction which prohibits the consummation of or which would materially modify or delay any of the transactions contemplated by the Transaction Documents; and

(o) No action, suit or proceeding before any Governmental Authority of competent jurisdiction shall have been commenced or threatened, and no inquiry or investigation by any Governmental Authority of competent jurisdiction shall have been commenced or threatened, against the Company, or any of the officers, directors or affiliates of the Company, seeking to restrain, prevent or change the transactions contemplated by the Transaction Documents, or seeking material damages in connection with such transactions.

9. INDEMNIFICATION.

In consideration of the Investor's execution and delivery of the Transaction Documents and acquiring the Securities hereunder and in addition to all of the Company's other obligations under the Transaction Documents, the Company shall defend, protect, indemnify and hold harmless the Investor and all of its affiliates, stockholders, members, officers, directors, employees and direct or indirect investors and any of the foregoing Person's agents or other representatives (including, without limitation, those retained in connection with the transactions contemplated by this Agreement) (collectively, the "Indemnitees") from and against any and all actions, causes of action, suits, claims, losses, costs, penalties, fees, liabilities and damages, and expenses in connection therewith (irrespective of whether any such Indemnitee is a party to the action for which indemnification hereunder is sought), and including reasonable attorneys' fees and disbursements (the "Indemnified Liabilities"), incurred by any Indemnitee as a result of, or arising out of, or relating to (a) any misrepresentation or breach of any representation or warranty made by the Company in the Transaction Documents or any other certificate, instrument or document contemplated hereby or thereby, (b) any breach of any covenant, agreement or obligation of the Company contained in the Transaction Documents or any other certificate, instrument or document contemplated hereby or thereby, or (c) any cause of action, suit or claim brought or made against such Indemnitee and arising out of or resulting from the execution, delivery, performance or enforcement of the Transaction Documents or any other certificate, instrument or document contemplated hereby or thereby, other than, in the case of clause (c), with respect to Indemnified Liabilities which directly and primarily result from the fraud, gross negligence or willful misconduct of an Indemnitee. The indemnity in this Section 9 shall not apply to amounts paid in settlement of any claim if such settlement is effected without the prior written consent of the Company, which consent shall not be unreasonably withheld, conditioned or delayed. To the extent that the foregoing undertaking by the Company may be unenforceable for any reason, the Company shall make the maximum contribution to the payment and satisfaction of each of the Indemnified Liabilities which is permissible under applicable law. Payment under this indemnification shall be made within thirty (30) days from the date the Indemnitee makes written request for it; provided that the Investor shall promptly reimburse the Company for any portion of such payment that a court of competent jurisdiction determines by final and non-appealable judgment that any such Indemnitee was not entitled to receive hereunder. A certificate containing reasonable detail as to the amount of such indemnification submitted to the Company by Investor shall be conclusive evidence, absent manifest error, of the amount due from the Company to Investor. If any action shall be brought against any Indemnitee in respect of which indemnity may be sought pursuant to this Agreement, such Indemnitee shall promptly notify the Company in writing, and the Company shall have the right to assume the defense thereof with counsel of its own choosing reasonably acceptable to the Indemnitee. Any Indemnitee shall have the right to employ separate counsel in any such action and participate in the defense thereof, but the fees and expenses of such counsel shall be at the expense of such Indemnitee, except to the extent that (i) the employment thereof has been specifically authorized by the Company in writing, (ii) the Company has failed after a reasonable period of time to assume such defense and to employ counsel or (iii) in such action there is, in the reasonable opinion of such separate counsel, a material conflict on any material issue between the position of the Company and the position of such Indemnitee, in which case the Company shall be responsible for the reasonable fees and expenses of no more than one such separate counsel.

10. SUSPENSION EVENTS.

A "Suspension Event" shall be deemed to have occurred at any time as any of the following events occurs:

(a) the effectiveness of the Registration Statement registering the Securities lapses for any reason (including, without limitation, the issuance of a stop order or similar order), the Registration Statement or the Prospectus is unavailable for the sale by the Company to the Investor (or the resale by the Investor) of any or all of the Securities to be issued to the Investor under the Transaction Documents (including, without limitation, as a result of any failure of the Company to satisfy all of the requirements for the use of a registration statement on Form S-3 pursuant to the Securities Act for the offering and sale of the Securities contemplated by this Agreement), and any such lapse or unavailability continues for a period of ten (10) consecutive Business Days or for more than an aggregate of thirty (30) Business Days in any 365-day period, but excluding a lapse or unavailability where: (i) the Company terminates the Registration Statement after the Investor has confirmed in writing that all of the Securities covered thereby have been resold or (ii) the Company supersedes the Registration Statement with a new registration statement, including, without limitation, when the Registration Statement is effectively replaced with a new registration statement covering Securities (provided in the case of this clause (ii) that all of the Securities covered by the superseded or terminated registration statement that have not theretofore been sold to the Investor are included in the superseding or new registration statement);

(b) the suspension of the Common Stock from trading or the failure of the Common Stock to be listed on the Principal Market for a period of one (1) Business Day, provided that the Company may not direct the Investor to purchase any shares of Common Stock during any such suspension;

(c) the delisting of the Common Stock from The Nasdaq Capital Market (or any nationally recognized successor thereto), provided, however, that the Common Stock is not immediately thereafter trading on The Nasdaq Global Market, The Nasdaq Global Select Market, the New York Stock Exchange, the NYSE American, the NYSE Arca, or the OTCQX or OTCQB operated by the OTC Markets Group, Inc. (or any nationally recognized successors thereto);

(d) the failure for any reason by the Transfer Agent to issue (i) the Commitment Shares to the Investor within two (2) Business Days after the Commencement Date, or (ii) Purchase Shares to the Investor within two (2) Business Days after the Regular Purchase Date, Accelerated Purchase Date or Additional Accelerated Purchase Date, as applicable, on which the Investor is entitled to receive such Purchase Shares;

(e) the Company breaches any representation, warranty, covenant or other term or condition under any Transaction Document if such breach would reasonably be expected to have a Material Adverse Effect and except, in the case of a breach of a covenant which is reasonably curable, only if such breach continues for a period of at least five (5) Business Days;

(f) if any Person commences a proceeding against the Company pursuant to or within the meaning of any Bankruptcy Law;

(g) if the Company, pursuant to or within the meaning of any Bankruptcy Law, (i) commences a voluntary case, (ii) consents to the entry of an order for relief against it in an involuntary case, (iii) consents to the appointment of a Custodian of it or for all or substantially all of its property, or (iv) makes a general assignment for the benefit of its creditors or is generally unable to pay its debts as the same become due;

(h) a court of competent jurisdiction enters an order or decree under any Bankruptcy Law that (i) is for relief against the Company in an involuntary case, (ii) appoints a Custodian of the Company or for all or substantially all of its property, or (iii) orders the liquidation of the Company;

(i) if, at any time, the Company is not eligible to transfer its Common Stock electronically as DWAC Shares; or

(j) if, at any time after the Commencement Date, the Exchange Cap is reached (to the extent such Exchange Cap is applicable pursuant to Section 2(f) hereof), and the stockholder approval referred to in Section 2(f)(i) has not been obtained in accordance with the applicable rules of The Nasdaq Stock Market LLC.

In addition to any other rights and remedies under applicable law and this Agreement, so long as a Suspension Event has occurred and is continuing, or if any event which, after notice and/or lapse of time, would become a Suspension Event has occurred and is continuing, the Company shall not deliver to the Investor any Regular Purchase Notice, Accelerated Purchase Notice or Additional Accelerated Purchase Notice.

11. TERMINATION

This Agreement may be terminated only as follows:

(a) If pursuant to or within the meaning of any Bankruptcy Law, the Company commences a voluntary case or any Person commences a proceeding against the Company which is not discharged within 90 days, a Custodian is appointed for the Company or for all or substantially all of its property, or the Company makes a general assignment for the benefit of its creditors (any of which would be a Suspension Event as described in Sections 10(f), 10(g) and 10(h) hereof), this Agreement shall automatically terminate without any liability or payment to the Company (except as set forth below) without further action or notice by any Person.

(b) In the event that the Commencement shall not have occurred on or before September 30, 2023, due to the failure to satisfy the conditions set forth in Sections 7 and 8 above with respect to the Commencement, either the Company or the Investor shall have the option to terminate this Agreement at the close of business on such date or thereafter without liability of any party to any other party (except as set forth below); provided, however, that the right to terminate this Agreement under this Section 11(b) shall not be available to any party if such party is then in breach of any covenant or agreement contained in this Agreement or any representation or warranty of such party contained in this Agreement fails to be true and correct such that the conditions set forth in Section 7(c) or Section 8(d), as applicable, could not then be satisfied.

(c) At any time after the Commencement Date, the Company shall have the option to terminate this Agreement for any reason or for no reason by delivering notice (a "Company Termination Notice") to the Investor electing to terminate this Agreement without any liability whatsoever of any party to any other party under this Agreement (except as set forth below). The Company Termination Notice shall not be effective until one (1) Business Day after it has been received by the Investor.

(d) This Agreement shall automatically terminate on the date that the Company sells and the Investor purchases the full Available Amount as provided herein, without any action or notice on the part of any party and without any liability whatsoever of any party to any other party under this Agreement (except as set forth below).

(c) If, for any reason or for no reason, the full Available Amount has not been purchased in accordance with Section 2 of this Agreement by the Maturity Date, this Agreement shall automatically terminate on the Maturity Date, without any action or notice on the part of any party and without any liability whatsoever of any party to any other party under this Agreement (except as set forth below).

Except as set forth in Sections 11(a) (in respect of a Suspension Event under Sections 10(f), 10(g) and 10(h)), 11(d) and 11(e), any termination of this Agreement pursuant to this Section 11 shall be effected by written notice from the Company to the Investor, or the Investor to the Company, as the case may be, setting forth the basis for the termination hereof. The representations and warranties of the Company and the Investor contained in Sections 3 and 4 hereof, the indemnification provisions set forth in Section 9 hereof and the agreements and covenants set forth in Sections 5, 6, 10, 11 and 13 shall survive the Commencement and any termination of this Agreement. No termination of this Agreement shall (i) affect the Company's or the Investor's rights or obligations under (A) this Agreement with respect to pending Regular Purchases, Accelerated Purchases and Additional Accelerated Purchases and the Company and the Investor shall complete their respective obligations with respect to any pending Regular Purchases, Accelerated Purchases and Additional Accelerated Purchases under this Agreement and (B) the Registration Rights Agreement, which shall survive any such termination in accordance with its terms, or (ii) be deemed to release the Company or the Investor from any liability for intentional misrepresentation or willful breach of any of the Transaction Documents.

12. WAIVER.

As of the date hereof, Investor hereby waives all preemptive rights, participation rights, rights of first refusal, demand rights, notice or other procedural requirements with respect to the Company's securities that may be triggered by the terms set forth in this Agreement, including but not limited to any rights under Section 5 of the Purchase Agreement dated as of June 4, 2021 (the "2021 Purchase Agreement") by and between the Company, the Investor and the other signature parties thereto. Further, the Investor hereby waives all restrictions on the Company's ability to effect or enter into an agreement to effect any issuance by the Company of common stock involving a Variable Rate Transaction (as defined in the 2021 Purchase Agreement) that may be triggered by this Agreement under the 2021 Purchase Agreement, including but not limited to any restrictions under Section 5(l) of the 2021 Purchase Agreement.

13. MISCELLANEOUS.

(a) Governing Law; Jurisdiction; Jury Trial. The corporate laws of the State of Delaware shall govern all issues concerning the relative rights of the Company and its stockholders. All other questions concerning the construction, validity, enforcement and interpretation of this Agreement and the other Transaction Documents shall be governed by the internal laws of the State of Illinois, without giving effect to any choice of law or conflict of law provision or rule (whether of the State of Illinois or any other jurisdictions) that would cause the application of the laws of any jurisdictions other than the State of Illinois. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the State of Illinois, County of Cook, for the adjudication of any dispute hereunder or under the other Transaction Documents or in connection herewith or therewith, or with any transaction contemplated hereby or discussed herein, 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, that such suit, action or proceeding is brought in an inconvenient forum or that the venue of such suit, action or proceeding is improper. Each party 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 to such party at the address for such 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 HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE, AND AGREES NOT TO REQUEST, A JURY TRIAL FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION HEREWITH OR ARISING OUT OF THIS AGREEMENT OR ANY TRANSACTION CONTEMPLATED HEREBY.**

(b) Counterparts. This Agreement may be executed in two or more identical counterparts, all of which 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; provided that a facsimile signature or signature delivered by e-mail in a “.pdf” format data file, including any electronic signature complying with the U.S. federal ESIGN Act of 2000, e.g., www.docusign.com, www.echosign.adobe.com, etc., shall be considered due execution and shall be binding upon the signatory thereto with the same force and effect as if the signature were an original signature.

(c) Headings. The headings of this Agreement are for convenience of reference and shall not form part of, or affect the interpretation of, this Agreement.

(d) Severability. If any provision of this Agreement shall be invalid or unenforceable in any jurisdiction, such invalidity or unenforceability shall not affect the validity or enforceability of the remainder of this Agreement in that jurisdiction or the validity or enforceability of any provision of this Agreement in any other jurisdiction.

(e) Entire Agreement. The Transaction Documents supersede all other prior oral or written agreements between the Investor, the Company, their affiliates and Persons acting on their behalf with respect to the subject matter thereof, and this Agreement, the other Transaction Documents and the instruments referenced herein contain the entire understanding of the parties with respect to the matters covered herein and therein and, except as specifically set forth herein or therein, neither the Company nor the Investor makes any representation, warranty, covenant or undertaking with respect to such matters. The Company acknowledges and agrees that it has not relied on, in any manner whatsoever, any representations or statements, written or oral, other than as expressly set forth in the Transaction Documents.

(f) Notices. Any notices, consents or other communications required or permitted to be given under the terms of this Agreement must be in writing and will be deemed to have been delivered: (i) upon receipt when delivered personally; (ii) upon receipt when sent by facsimile or email (provided confirmation of transmission is mechanically or electronically generated and kept on file by the sending party); or (iii) one Business Day after deposit with a nationally recognized overnight delivery service, in each case properly addressed to the party to receive the same. The addresses for such communications shall be:

If to the Company:

Ocuphire Pharma, Inc.
37000 Grand River Avenue, Suite 120
Farmington Hills, MI 48335
Telephone: (248) 957-9024
E-mail: rrodgers@ocuphire.com
Attention: Richard J. Rodgers
Interim President and Chief Executive Officer

With a copy to (which shall not constitute notice or service of process):

Honigman LLP
650 Trade Center Way, Suite 200
Kalamazoo, MI 49002-0402
Telephone: (269) 337-7700
E-mail: ptorrence@honigman.com
Attention: Phillip D. Torrence, Esq.

If to the Investor:

Lincoln Park Capital Fund, LLC
440 North Wells, Suite 410
Chicago, IL 60654
Telephone: (312) 822-9300
Facsimile: (312) 822-9301
E-mail: jscheinfeld@lpcfunds.com/jcope@lpcfunds.com
Attention: Josh Scheinfeld/Jonathan Cope

With a copy to (which shall not constitute notice or service of process):

Reed Smith LLP
599 Lexington Avenue
New York, NY 10022
Telephone: (212) 549-0285
Facsimile: (212) 521-5450
E-mail: amarsico@reedsmith.com
Attention: Anthony J. Marsico, Esq.

If to the Transfer Agent:

American Stock Transfer & Trust Company LLC
6201 15th Avenue
Brooklyn, NY 11219
Telephone: (718) 921-8542
Facsimile: (718) 765-8742
E-mail: dmosley@astfinancial.com
Attention: DeVonna Mosley

or at such other address, email address and/or facsimile number and/or to the attention of such other Person as the recipient party has specified by written notice given to each other party three (3) Business Days prior to the effectiveness of such change. Written confirmation of receipt (A) given by the recipient of such notice, consent or other communication, (B) mechanically or electronically generated by the sender's facsimile machine or email account containing the time, date, and recipient facsimile number or email address, as applicable, and an image of the first page of such transmission or (C) provided by a nationally recognized overnight delivery service, shall be rebuttable evidence of personal service, receipt by facsimile or receipt from a nationally recognized overnight delivery service in accordance with clause (i), (ii) or (iii) above, respectively.

(g) Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties and any permitted successors and assigns of the Company. The Company shall not assign this Agreement or any rights or obligations hereunder without the prior written consent of the Investor, including by merger or consolidation. The Investor may not assign its rights or obligations under this Agreement.

(h) No Third Party Beneficiaries. This Agreement is intended for the benefit of the parties hereto and any permitted successors and assigns of the Company and, except as set forth in Section 9, is not for the benefit of, nor may any provision hereof be enforced by, any other Person.

(i) Publicity. The Company shall afford the Investor and its counsel with the opportunity to review and comment upon, shall consult with the Investor and its counsel on the form and substance of, and shall give due consideration to all such comments from the Investor or its counsel on, any press release, SEC filing or any other public disclosure by or on behalf of the Company relating to the Investor, its purchases hereunder or any aspect of the Securities, the Transaction Documents or the transactions contemplated thereby, unless otherwise agreed by the Company and the Investor, not less than 24 hours prior to the issuance, filing or public disclosure thereof. Unless otherwise agreed by the Company and the Investor, the Investor must be provided with a final version of any such press release, SEC filing or other public disclosure at least 24 hours prior to any release, filing or use by the Company thereof. The Company agrees and acknowledges that its failure to fully comply with this provision constitutes a Material Adverse Effect.

(j) Further Assurances. Each party shall do and perform, or cause to be done and performed, all such further acts and things, and shall execute and deliver all such other agreements, certificates, instruments and documents, as the other party may reasonably request in order to consummate and make effective, as soon as reasonably possible, the Commencement, and to carry out the intent and accomplish the purposes of this Agreement and the consummation of the transactions contemplated hereby.

(k) No Financial Advisor, Placement Agent, Broker or Finder. The Company represents and warrants to the Investor that it has not engaged any financial advisor, placement agent, broker or finder in connection with the transactions contemplated hereby. The Investor represents and warrants to the Company that it has not engaged any financial advisor, placement agent, broker or finder in connection with the transactions contemplated hereby. The Company shall be responsible for the payment of any fees or commissions, if any, of any financial advisor, placement agent, broker or finder relating to or arising out of the transactions contemplated hereby. The Company shall pay, and hold the Investor harmless against, any liability, loss or expense (including, without limitation, attorneys' fees and out of pocket expenses) arising in connection with any such claim.

(l) No Strict Construction. 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.

(m) Remedies, Other Obligations, Breaches and Injunctive Relief. The Investor's remedies provided in this Agreement, including, without limitation, the Investor's remedies provided in Section 9, shall be cumulative and in addition to all other remedies available to the Investor under this Agreement, at law or in equity (including a decree of specific performance and/or other injunctive relief), no remedy of the Investor contained herein shall be deemed a waiver of compliance with the provisions giving rise to such remedy and nothing herein shall limit the Investor's right to pursue actual damages for any failure by the Company to comply with the terms of this Agreement. The Company acknowledges that a breach by it of its obligations hereunder will cause irreparable harm to the Investor and that the remedy at law for any such breach may be inadequate. The Company therefore agrees that, in the event of any such breach or threatened breach, the Investor shall be entitled, in addition to all other available remedies, to an injunction restraining any breach, without the necessity of showing economic loss and without any bond or other security being required.

(n) Enforcement Costs. If: (i) this Agreement is placed by the Investor in the hands of an attorney for enforcement or is enforced by the Investor through any legal proceeding; (ii) an attorney is retained to represent the Investor in any bankruptcy, reorganization, receivership or other proceedings affecting creditors' rights and involving a claim under this Agreement; or (iii) an attorney is retained to represent the Investor in any other proceedings whatsoever in connection with this Agreement, then the Company shall pay to the Investor, as incurred by the Investor, all reasonable costs and expenses including reasonable attorneys' fees incurred in connection therewith, in addition to all other amounts due hereunder.

(o) Amendment; Waiver; Failure or Indulgence Not Waiver. No provision of this Agreement may be amended other than by a written instrument signed by both parties hereto. No provision of this Agreement may be waived other than in a written instrument signed by the party against whom enforcement of such waiver is sought. No failure or delay in the exercise of any power, right or privilege hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of any such power, right or privilege preclude other or further exercise thereof or of any other right, power or privilege.

*** Signature Page Follows ***

IN WITNESS WHEREOF, the Investor and the Company have caused this Agreement to be duly executed as of the date first written above.

THE COMPANY:

OCUPHIRE PHARMA, INC.

By: /s/ Richard J. Rodgers
Name: Richard J. Rodgers
Title: Interim President and Chief Executive Officer

INVESTOR:

LINCOLN PARK CAPITAL FUND, LLC
BY: LINCOLN PARK CAPITAL, LLC
BY: ROCKLEDGE CAPITAL CORPORATION

By: /s/ Joshua Scheinfeld
Name: Joshua Scheinfeld
Title: President

EXHIBITS

Exhibit A	Form of Officer's Certificate
Exhibit B	Form of Resolutions of Board of Directors of the Company
Exhibit C	Form of Secretary's Certificate

EXHIBIT A

FORM OF OFFICER'S CERTIFICATE

This Officer's Certificate ("**Certificate**") is being delivered pursuant to Section 8(d) of that certain Purchase Agreement dated as of August 10, 2023 ("**Purchase Agreement**"), by and between **OCUPHIRE PHARMA, INC.**, a Delaware corporation (the "**Company**"), and **LINCOLN PARK CAPITAL FUND, LLC**, an Illinois limited liability company (the "**Investor**"). Terms used herein and not otherwise defined shall have the meanings ascribed to them in the Purchase Agreement.

The undersigned, _____, _____ of the Company, hereby certifies, on behalf of the Company and not in his individual capacity, as follows:

1. I am the _____ of the Company and make the statements contained in this Certificate;
2. The representations and warranties of the Company in the Purchase Agreement are true and correct in all material respects (except to the extent that any of such representations and warranties is already qualified as to materiality in Section 4 of the Purchase Agreement, in which case, such representations and warranties are true and correct without further qualification) as of the date of the Purchase Agreement and as of the Commencement Date as though made at that time (except for representations and warranties that speak as of a specific date, in which case such representations and warranties are true and correct in all material respects as of such date);
3. The Company has performed, satisfied and complied in all material respects with covenants, agreements and conditions required by the Transaction Documents to be performed, satisfied or complied with by the Company at or prior to the Commencement Date.
4. The Company has not taken any steps, and does not currently expect to take 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 or insolvency proceedings. The Company is financially solvent and is generally able to pay its debts as they become due.

IN WITNESS WHEREOF, I have hereunder signed my name on this ___ day of _____.

Name:
Title

The undersigned as _____ :
qualified and acting _____ of **OCUPHIRE PHARMA, INC.**, a Delaware corporation, hereby certifies that _____ is the duly elected, appointed,
and that the signature appearing above is his genuine signature.

Title:

EXHIBIT B

**FORM OF COMPANY RESOLUTIONS
FOR SIGNING PURCHASE AGREEMENT**

**UNANIMOUS WRITTEN CONSENT OF
OCUPHIRE PHARMA, INC.**

In accordance with the corporate laws of the state of Delaware, the undersigned, being all of the directors of Ocuphire Pharma, Inc., a Delaware corporation (the "Corporation"), do hereby consent to and adopt the following resolutions as the action of the Board of Directors for and on behalf of the Corporation and hereby direct that this Consent be filed with the minutes of the proceedings of the Board of Directors:

WHEREAS, there has been presented to the Board of Directors of the Corporation a draft of the Purchase Agreement (the "Purchase Agreement") by and between the Corporation and Lincoln Park Capital Fund, LLC ("Lincoln Park"), providing for the purchase by Lincoln Park of up to Fifty Million Dollars (\$50,000,000) of the Corporation's common stock, par value \$0.0001 per share (the "Common Stock"); and

WHEREAS, after careful consideration of the Purchase Agreement, the documents incident thereto and other factors deemed relevant by the Board of Directors, the Board of Directors has determined that it is advisable and in the best interests of the Corporation to engage in the transactions contemplated by the Purchase Agreement, including, but not limited to, the issuance of 246,792 shares of Common Stock to Lincoln Park as a commitment fee (the "Commitment Shares") and the sale of shares of Common Stock to Lincoln Park up to the available amount under the Purchase Agreement (the "Purchase Shares", and together with the Commitment Shares, the "Securities").

Transaction Documents

NOW, THEREFORE, BE IT RESOLVED, that the transactions described in the Purchase Agreement are hereby approved and [●] and [●] (the "Authorized Officers") are severally authorized to execute and deliver the Purchase Agreement, and any other agreements or documents contemplated thereby, with such amendments, changes, additions and deletions as the Authorized Officers may deem to be appropriate and approve on behalf of, the Corporation, such approval to be conclusively evidenced by the signature of an Authorized Officer thereon; and

FURTHER RESOLVED, that the terms and provisions of the forms of Irrevocable Transfer Agent Instructions and Notice of Effectiveness of Registration Statement (collectively, the "Instructions") are hereby approved and the Authorized Officers are authorized to execute and deliver the Instructions on behalf of the Company in accordance with the Purchase Agreement, with such amendments, changes, additions and deletions as the Authorized Officers may deem appropriate and approve on behalf of, the Corporation, such approval to be conclusively evidenced by the signature of an Authorized Officer thereon; and

Execution of Purchase Agreement

FURTHER RESOLVED, that the Corporation be and it hereby is authorized to execute the Purchase Agreement providing for the purchase of up to Fifty Million Dollars (\$50,000,000) of the Corporation's common stock; and

Issuance of Common Stock

FURTHER RESOLVED, that the Corporation is hereby authorized to issue to Lincoln Park Capital Fund, LLC, 246,792 shares of Common Stock as Commitment Shares and that upon issuance of the Commitment Shares pursuant to the Purchase Agreement the Commitment Shares shall be duly authorized, validly issued, fully paid and nonassessable with no personal liability attaching to the ownership thereof; and

FURTHER RESOLVED, that the Corporation is hereby authorized to issue shares of Common Stock upon the purchase of Purchase Shares up to the Available Amount under the Purchase Agreement in accordance with the terms of the Purchase Agreement and that, upon issuance of the Purchase Shares pursuant to the Purchase Agreement, the Purchase Shares will be duly authorized, validly issued, fully paid and nonassessable with no personal liability attaching to the ownership thereof; and

FURTHER RESOLVED, that the Corporation shall initially reserve [●] shares of Common Stock for issuance as Purchase Shares under the Purchase Agreement; and

Approval of Actions

FURTHER RESOLVED, that, without limiting the foregoing, the Authorized Officers are, and each of them hereby is, authorized and directed to proceed on behalf of the Corporation and to take all such steps as deemed necessary or appropriate, with the advice and assistance of counsel, to cause the Corporation to consummate the agreements referred to herein and to perform its obligations under such agreements; and

FURTHER RESOLVED, that the Authorized Officers be, and each of them hereby is, authorized, empowered and directed on behalf of and in the name of the Corporation, to take or cause to be taken all such further actions and to execute and deliver or cause to be executed and delivered all such further agreements, amendments, documents, certificates, reports, schedules, applications, notices, letters, instructions, requests or other instruments (including any amendments or supplements to any of the documents contemplated by these resolutions) and undertakings and to incur and pay all such fees and expenses as in their judgment shall be necessary, appropriate or convenient to carry into effect the purpose and intent of any and all of the foregoing resolutions, and to do any and all things which, in any such officer's judgment, may be necessary, appropriate or convenient to effect each of the foregoing resolutions and to carry out the purposes thereof, the taking of any such actions, the execution and delivery of any such certificates, instructions, requests, or instruments, or the doing of any such things to be conclusive evidence of their necessity or desirability; and that all actions heretofore taken by any officer or director of the Corporation in connection with the transactions contemplated by the agreements described herein are hereby approved, ratified and confirmed in all respects; and

FURTHER RESOLVED, that the Authorized Officers be, and each of them hereby is, authorized to prepare and file with the Securities and Exchange Commission one or more prospectus supplements (in preliminary and/or final form, as required by applicable securities laws) in connection with the issuance of Securities (each, a "Prospectus Supplement") to the shelf registration statement (File No. 333-252715), filed on February 4, 2021, and as declared effective by the Securities and Exchange Commission on February 12, 2021; and

FURTHER RESOLVED, that the issuance by the Company of the Securities as contemplated by the Prospectus Supplement is hereby authorized and approved in all respects and if and when any such Securities consisting of the Company's common stock are so issued, such Securities will be validly issued, fully paid and nonassessable.

IN WITNESS WHEREOF, the Board of Directors has executed and delivered this Consent effective as of the last date set forth below.

Date

Date

Date

Date

Date

Date

being all of the directors of **OCUPHIRE PHARMA, INC.**

EXHIBIT C

FORM OF SECRETARY'S CERTIFICATE

This Secretary's Certificate ("Certificate") is being delivered pursuant to Section 8(j) of that certain Purchase Agreement dated as of August 10, 2023 ("Purchase Agreement"), by and between **OCUPHIRE PHARMA, INC.**, a Delaware corporation (the "Company"), and **LINCOLN PARK CAPITAL FUND, LLC** (the "Investor"), pursuant to which the Company may sell to the Investor up to Fifty Million Dollars (\$50,000,000) of the Company's Common Stock, par value \$0.0001 per share (the "Common Stock"). Terms used herein and not otherwise defined shall have the meanings ascribed to them in the Purchase Agreement.

The undersigned, _____, Secretary of the Company, hereby certifies, on behalf of the Company and not in his individual capacity, as follows:

1. I am the Secretary of the Company and make the statements contained in this Secretary's Certificate.
2. Attached hereto as Exhibit A and Exhibit B are true, correct and complete copies of the Company's amended and restated bylaws ("Bylaws") and restated certificate of incorporation ("Charter"), in each case, as amended through the date hereof, and no action has been taken by the Company, its directors, officers or stockholders, in contemplation of the filing of any further amendment relating to or affecting the Bylaws or Charter.
3. Attached hereto as Exhibit C are true, correct and complete copies of the resolutions duly adopted by the Board of Directors of the Company on _____, at which a quorum was present and acting throughout. Such resolutions have not been amended, modified or rescinded and remain in full force and effect and such resolutions are the only resolutions adopted by the Company's Board of Directors, or any committee thereof, or the stockholders of the Company relating to or affecting (i) the entering into and performance of the Purchase Agreement, or the issuance, offering and sale of the Securities and (ii) the performance of the Company of its obligation under the Transaction Documents as contemplated therein.

4. As of the date hereof, the authorized, issued and reserved capital stock of the Company is as set forth on Exhibit D hereto.

IN WITNESS WHEREOF, I have hereunder signed my name on this ___ day of _____.

Secretary

The undersigned as _____ of **OCUPHIRE PHARMA, INC.**, a Delaware corporation, hereby certifies that _____ is the duly elected, appointed, qualified and acting Secretary of **OCUPHIRE PHARMA, INC.**, and that the signature appearing above is his genuine signature.

[TITLE]

Form of Company Counsel Opinion

1. The Company is a corporation validly existing and in good standing under the laws of Delaware, with the corporate authority to own, lease and operate its properties and to conduct its business as currently conducted, as described in the Registration Statement and the Prospectus. The Company is duly qualified as a foreign corporation to transact business and is in good standing in Michigan.

2. The Company has the corporate power to execute, deliver and perform its obligations under the Purchase Agreement and the Registration Rights Agreement. The Company has the corporate power to conduct its business and to own and use the properties owned and used by it, in all material respects, as described in the Registration Statement and the Prospectus.

3. The execution, delivery, and performance by the Company of the Purchase Agreement and the Registration Rights Agreement, the consummation by the Company of the transactions contemplated thereby, including the offering, sale, and issuance of the Securities in accordance with the terms and conditions of the Purchase Agreement, and fulfillment and compliance by the Company with each of its obligations thereunder in accordance with the terms thereof, have been duly authorized and approved by the Company's Board of Directors and no further consent, approval, or authorization of the Company, its Board of Directors, or its stockholders is required.

4. Each of the Purchase Agreement and the Registration Rights Agreement has been duly executed and delivered by the Company and constitutes the valid and binding obligation of the Company, enforceable against the Company in accordance with its terms, except as such enforceability may be limited by general principles of equity or applicable bankruptcy, insolvency, reorganization, moratorium, liquidation, or similar laws relating to, or affecting creditor's rights and remedies.

5. The execution, delivery, and performance by the Company of each of the Purchase Agreement and the Registration Rights Agreement, the consummation by the Company of the transactions contemplated thereby, including the offering, sale, and issuance of the Securities in accordance with the terms and conditions of the Purchase Agreement, and fulfillment and compliance by the Company with each of its obligations thereunder in accordance with the terms thereof, do not and will not: (i) conflict with or violate any provision of the Certificate of Incorporation or the Bylaws, (ii) conflict with, constitute a breach of or default or an event which, with the giving of notice or lapse of time or both, constitutes or could constitute a breach or a default under any material agreement, instrument, or document filed or incorporated by reference as an exhibit to the Registration Statement, or filed or incorporated by reference as an exhibit to any of the SEC Documents that are incorporated by reference in the Registration Statement and the Prospectus (the "Material Agreements"), (iii) violate any Federal or Delaware or Michigan state statute, law, rule, or regulation applicable to the Company or the transactions contemplated by the Purchase Agreement and the Registration Rights Agreement, or (iv) violate any order, writ, injunction, or decree applicable to the Company.

6. The Commitment Shares have been duly authorized by all necessary corporate action on the part of the Company and are validly issued, fully paid, and non-assessable and free of any preemptive or other similar rights arising under the Certificate of Incorporation, the Bylaws, the Delaware General Corporation Law, as amended (the "DGCL"), or any of the Material Agreements. [●] shares of Common Stock have been properly reserved for issuance and sale as Purchase Shares under the Purchase Agreement. The Purchase Shares have been duly authorized by all necessary corporate action on the part of the Company and, when issued, sold, and delivered by the Company pursuant to the Purchase Agreement against payment therefor, will be validly issued, fully paid, and non-assessable and free of any preemptive or other similar rights arising under the Certificate of Incorporation, the Bylaws, the DGCL or any of the Material Agreements.

7. No consent, approval, authorization, or other order of, or registration or filing under the DGCL, or with any Michigan state or U.S. federal court or other governmental or regulatory authority or agency, which is in such counsel's experience customarily applicable to transactions of the type contemplated by the Purchase Agreement and the Registration Rights Agreement is required for the Company's execution, delivery, and performance of the Purchase Agreement and the Registration Rights Agreement, or the consummation of the transactions contemplated by the Purchase Agreement and the Registration Rights Agreement, other than such as previously have been obtained or made under the Securities Act or the Exchange Act, and such approvals as have been obtained in connection with the listing of the Securities on the Principal Market, or as may be required under applicable state securities or Blue Sky laws (as to which we expresses no opinion).

8. The Common Stock is registered pursuant to Section 12(b) of the Exchange Act. To our knowledge, since one (1) year preceding the date of the Purchase Agreement and the Registration Rights Agreement, the Company has been in compliance with the reporting requirements of the Exchange Act applicable to it.

9. The Company is not, and after giving effect to the issuance and sale of the Securities under the Purchase Agreement and the application of the proceeds therefrom as described in the Registration Statement and the Prospectus, will not be, an "investment company," as that term is defined in the Investment Company Act of 1940, as amended.

10. The Company is not, and upon issuance and sale of the Securities and the application of the net proceeds therefrom as described in the Registration Statement and the Prospectus will not be, required to register as an "investment company" under the Investment Company Act of 1940, as amended.

11. The Company has an authorized capitalization as set forth in the Registration Statement and the Prospectus under the heading "[●]"; all the outstanding shares of capital stock of the Company have been duly and validly authorized and issued and are fully paid and non-assessable; the capital stock of the Company conforms in all material respects to the description thereof contained in the Registration Statement and the Prospectus.

12. The statements in the Registration Statement and Prospectus under the heading "Description Of Capital Stock," insofar as such statements purport to summarize legal matters, agreements or documents discussed therein, fairly present, to the extent required by the Securities Act and the rules thereunder, in all material respects, such legal matters, agreements or documents.

13. There are not (i) any pending legal proceedings to which the Company is a party or of which the Company's property is the subject, or (ii) any proceedings contemplated by any Governmental Authority, in each case, which are required to be disclosed in the Registration Statement and the Prospectus and are not so disclosed.

14. Neither the Company, nor any of its affiliates, nor any person acting on its behalf has, directly or indirectly, made any offers or sales of any security or solicited any offers to buy any security, under circumstances that would cause the offering, issuance and sale of the Securities pursuant to the Purchase Agreement and the Registration Rights Agreement to be integrated with prior offerings by the Company for purposes of the Securities Act, which would require the registration of the sales of any such securities under the Securities Act.

15. The Registration Statement was declared effective under the Securities Act as of February 12, 2021 at 4:30 p.m., Eastern time, based solely upon a review of the Notice of Effectiveness appearing on EDGAR; the Prospectus was filed with the SEC pursuant to Rule 424(b)(5) under the Securities Act; and based solely upon a review of the "Stop Orders" listed on the SEC's website at <http://www.sec.gov/litigation/stoporders.shtml>, no order suspending the effectiveness of the Registration Statement has been issued and no proceeding for that purpose or pursuant to Section 8A of the Securities Act against the Company or in connection with the offering is pending or, to our knowledge, threatened by the SEC.

16. The Registration Statement as of its effective date and the Prospectus as of its date and the date hereof appear on their face to be appropriately responsive in all material respects with the requirements of the Securities Act and the applicable rules and regulations thereunder (except that, in each case, we express no opinion with respect to Regulation S-T or the financial statements, schedules or other financial data included therein, derived therefrom or omitted therefrom). Each of the reports, statements, schedules, and other documents filed by the company with the SEC under the Exchange Act and incorporated by reference in the Registration Statement and the Prospectus (the "Incorporated Documents"), when such Incorporated Document was filed with the SEC, complied as to the form in all material respects with the requirements of the Exchange Act and the applicable rules and regulations thereunder.

[THE FOLLOWING MAY BE MADE IN A SEPARATE NEGATIVE ASSURANCES LETTER]

Subject to the foregoing, we confirm to you that, on the basis of the information we gained in the course of performing the services referred to above, nothing has come to our attention that has caused us to believe that (1) the Registration Statement, as of its most recent effective date, contained an untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary to make the statements therein not misleading, or (2) the Prospectus, as of its date or as of the date hereof, included or includes an untrue statement of a material fact or omitted or omits to state a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading; it being understood that, in connection with clauses (1) and (2) above, we make no statement as to any financial statements (including notes thereto) or financial schedules or other financial, accounting, or statistical data included, or incorporated by reference, in, or omitted from, the Registration Statement or the Prospectus.

REGISTRATION RIGHTS AGREEMENT

REGISTRATION RIGHTS AGREEMENT (this "Agreement"), dated as of August 10, 2023, by and between **OCUPHIRE PHARMA, INC.**, a Delaware corporation (the "Company"), and **LINCOLN PARK CAPITAL FUND, LLC**, an Illinois limited liability company (together with its permitted assigns, the "Investor"). Capitalized terms used herein and not otherwise defined herein shall have the respective meanings set forth in the Purchase Agreement by and between the parties hereto, dated as of the date hereof (as amended, restated, supplemented or otherwise modified from time to time, the "Purchase Agreement").

WHEREAS:

A. Upon the terms and subject to the conditions of the Purchase Agreement, (i) the Company has agreed to issue to the Investor, and the Investor has agreed to purchase, up to Fifty Million Dollars (\$50,000,000) of the Company's common stock, par value \$0.0001 per share (the "Common Stock"), pursuant to the Purchase Agreement (such shares, the "Purchase Shares"), and (ii) the Company has agreed to issue to the Investor upon the execution of the Purchase Agreement such number of shares of Common Stock as set forth in Section 5(e) of the Purchase Agreement (the "Commitment Shares"); and

B. To induce the Investor to enter into the Purchase Agreement, the Company has agreed to provide certain registration rights under the Securities Act of 1933, as amended, and the rules and regulations thereunder, or any similar successor statute (collectively, the "Securities Act"), and applicable state securities laws.

NOW, THEREFORE, in consideration of the promises and the mutual covenants contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Company and the Investor hereby agree as follows:

1. DEFINITIONS.

As used in this Agreement, the following terms shall have the following meanings:

(a) "Base Prospectus" means the Company's final base prospectus, dated February 12, 2021, a preliminary form of which is included in the Registration Statement (defined below), including the documents and information incorporated by reference therein.

(b) "Initial Prospectus Supplement" means the prospectus supplement of the Company dated August 11, 2023 relating to the Securities, including the accompanying Base Prospectus, to be prepared and filed by the Company with the SEC pursuant to Rule 424(b) under the Securities Act and in accordance herewith, together with all documents and information incorporated therein by reference.

(c) "Prospectus" means the Base Prospectus, as supplemented by any Prospectus Supplement (including the Initial Prospectus Supplement), including the documents and information incorporated by reference therein.

(d) "Prospectus Supplement" means any prospectus supplement to the Base Prospectus (including the Initial Prospectus Supplement) filed with the SEC pursuant to Rule 424(b) under the Securities Act in connection with the transactions contemplated by this Agreement, including the documents and information incorporated by reference therein.

(e) “Register,” “Registered,” and “Registration” refer to a registration effected by preparing and filing one or more registration statements of the Company in compliance with the Securities Act and pursuant to Rule 415 under the Securities Act or any successor rule providing for offering securities on a continuous basis (“Rule 415”), and the declaration or ordering of effectiveness of such registration statement(s) by the SEC.

(f) “Registrable Securities” means the Purchase Shares that may from time to time be issued or issuable to the Investor upon purchases of the Available Amount under the Purchase Agreement (without regard to any limitation or restriction on purchases), the Commitment Shares issued or issuable to the Investor, and any shares of capital stock issued or issuable with respect to the Purchase Shares, the Commitment Shares or the Purchase Agreement as a result of any stock split, stock dividend, recapitalization, exchange or similar event, without regard to any limitation on purchases under the Purchase Agreement.

(g) “Registration Statement” means the effective registration statement on Form S-3 (Commission File No. 333-252715) filed by the Company with the SEC pursuant to the Securities Act for the registration of shares of its Common Stock, including the Securities, and certain other securities of the Company, as such Registration Statement has been or may be amended and supplemented from time to time, including the financial statements, exhibits and schedules thereto, and all other documents filed as part thereof or incorporated by reference therein, and including all information deemed to be a part thereof at the time of effectiveness pursuant to Rule 430B of the Securities Act, including (i) any registration statement filed by the Company pursuant to Rule 462(b) under the Securities Act in connection with the transactions contemplated by the Transaction Documents and (ii) any comparable successor registration statement filed by the Company with the SEC pursuant to the Securities Act for the registration of shares of its Common Stock, including the Securities.

2. REGISTRATION.

(a) Initial Prospectus Supplement. The Company agrees that it shall, within two (2) Business Days of the date of this Agreement, file with the SEC the Initial Prospectus Supplement pursuant to Rule 424(b) under the Securities Act, in the form agreed upon by the Investor prior to such filing, specifically relating to the transactions contemplated by, and describing the material terms and conditions of, the Transaction Documents, providing for the offer and sale of a total amount of Common Stock thereunder equal to the sum of (i) the full Available Amount worth of Purchase Shares and (ii) all of the Commitment Shares, containing information previously omitted at the time of effectiveness of the Registration Statement in reliance on Rule 430B under the Securities Act, and disclosing all information relating to the transactions contemplated by the Transaction Documents required to be disclosed in the Registration Statement and the Prospectus as of the date of the Initial Prospectus Supplement, including, without limitation, information required to be disclosed in the section captioned “Plan of Distribution” in the Prospectus. The Investor acknowledges that it will be identified in the Initial Prospectus Supplement as an underwriter within the meaning of Section 2(a)(11) of the Securities Act. The Company shall permit the Investor and its counsel to review and comment upon a substantially complete pre-filing draft of the Initial Prospectus Supplement at least one (1) Business Day prior to the date of its filing with the SEC, the Company shall give due consideration to all such comments, and the Company shall not file the Initial Prospectus Supplement with the SEC in a form to which the Investor reasonably objects. The Investor shall use its reasonable best efforts to comment upon such substantially complete pre-filing draft of the Initial Prospectus Supplement within one (1) Business Day from the date the Investor receives such substantially complete pre-filing draft thereof from the Company. The Investor shall furnish to the Company such information regarding itself, the Securities held by it and the intended method of distribution thereof, including any arrangement between the Investor and any other Person relating to the sale or distribution of the Securities, as shall be reasonably requested by the Company in connection with the preparation and filing of the Initial Prospectus Supplement, and shall otherwise cooperate with the Company as reasonably requested by the Company in connection with the preparation and filing of the Initial Prospectus Supplement with the SEC.

(b) Effective Registration Statement; Current Prospectus; Securities Law Compliance. The Company shall use its reasonable best efforts to keep the Registration Statement effective pursuant to Rule 415 promulgated under the Securities Act (including through any necessary renewals), and to keep the Registration Statement and the Prospectus current and available for issuances and sales of all of the Securities by the Company to the Investor, and for the resale by the Investor, at all times until the earliest of (i) the date on which the Investor shall have sold all the Securities and no Available Amount remains under the Purchase Agreement, (ii) thirty (30) days following the Maturity Date and (iii) ninety (90) days following the termination of the Purchase Agreement in accordance with Section 11 of the Purchase Agreement (the “Registration Period”). Without limiting the generality of the foregoing, during the Registration Period, the Company shall (a) take all action necessary to continue to be required to file reports with the Commission pursuant to Section 13 or 15(d) of the Exchange Act, shall comply with its reporting and filing obligations under the Exchange Act, and shall not take any action or file any document (whether or not permitted by the Exchange Act) to terminate or suspend its reporting and filing obligations under the Exchange Act and (b) prepare and file with the SEC, at the Company’s expense, such amendments (including, without limitation, post-effective amendments) to the Registration Statement and such Prospectus Supplements pursuant to Rule 424(b) under the Securities Act, in each case, as may be necessary to keep the Registration Statement effective pursuant to Rule 415 promulgated under the Securities Act, and to keep the Registration Statement and the Prospectus current and available for issuances and sales of all of the Securities by the Company to the Investor, and for the resale of all of the Securities by the Investor, at all times during the Registration Period (it being hereby acknowledged and agreed that the Company shall prepare and file with the SEC, at the Company’s expense, immediately prior to the third (3rd) anniversary of the initial effective date of the Registration Statement (the “Renewal Date”), a new Registration Statement relating to the Securities, in a form satisfactory to the Investor and its counsel, and the Company shall use its reasonable best efforts to cause such Registration Statement to be declared effective within 180 days after the Renewal Date). Without limiting the generality of the foregoing, to the extent required under the Securities Act or under interpretations by the SEC thereof, as promptly as practicable after the close of each of the Company’s fiscal quarters (or on such other dates as required under the Securities Act or under interpretations by the SEC thereof), the Company shall prepare a Prospectus Supplement, which will set forth the number of Purchase Shares sold to the Investor during such quarterly period (or other relevant period), the purchase price for such Purchase Shares and the net proceeds received by the Company from such sales, and shall file such Prospectus Supplement with the SEC pursuant to Rule 424(b) under the Securities Act (and within the time periods required by Rule 424(b) and Rule 430B under the Securities Act); provided, however, that if any such quarterly Prospectus Supplement is not required to be filed under the Securities Act or under interpretations by the SEC thereof, the Company shall disclose the information referenced in the immediately preceding sentence in its annual report on Form 10-K or its quarterly report on Form 10-Q (as applicable) in respect of the quarterly period that ended immediately before the filing of such report in which sales of Purchase Shares were made to the Investor under the Purchase Agreement, and file such report with the SEC within the applicable time period required by the Exchange Act. The Investor shall furnish to the Company such information regarding itself, the Securities held by it and the intended method of distribution thereof as shall be reasonably requested by the Company in connection with the preparation and filing of any such amendment to the Registration Statement (or new Registration Statement) or any such Prospectus Supplement, and shall otherwise cooperate with the Company as reasonably requested by the Company in connection with the preparation and filing of any such amendment to the Registration Statement (or new Registration Statement) or any such Prospectus Supplement. The Company shall comply with all applicable federal, state and foreign securities laws in connection with the offer, issuance and sale of the Securities contemplated by the Transaction Documents.

3. RELATED OBLIGATIONS.

With respect to the Registration Statement and the Prospectus, the Company shall use its reasonable best efforts to effect the registration of the Registrable Securities in accordance with the intended method of disposition thereof and, pursuant thereto, the Company shall have the following obligations:

(a) Stop Orders. The Company shall advise the Investor promptly (but in no event later than 24 hours) and shall confirm such advice in writing: (i) of the Company's receipt of notice of any request by the SEC for amendment of or a supplement to the Registration Statement, the Prospectus, any Prospectus Supplement or for any additional information; (ii) of the Company's receipt of notice of the issuance by the SEC of any stop order suspending the effectiveness of the Registration Statement or prohibiting or suspending the use of the Prospectus or any Prospectus Supplement, or of the Company's receipt of any notification of the suspension of qualification of the Securities for offering or sale in any jurisdiction or the initiation or contemplated initiation of any proceeding for such purpose; and (iii) of the Company becoming aware of the happening of any event, which makes any statement of a material fact made in the Registration Statement, the Prospectus or any Prospectus Supplement untrue or which requires the making of any additions to or changes to the statements then made in the Registration Statement, the Prospectus or any Prospectus Supplement in order to state a material fact required by the Securities Act to be stated therein or necessary in order to make the statements then made therein (in the case of the Prospectus or any Prospectus Supplement, in light of the circumstances under which they were made) not misleading, or of the necessity to amend the Registration Statement or supplement the Prospectus or any Prospectus Supplement to comply with the Securities Act or any other applicable laws. The Company shall not be required to disclose to the Investor the substance or specific reasons of any of the events set forth in clauses (i) through (iii) of the immediately preceding sentence, but rather, shall only be required to disclose that the event has occurred. The Company shall not deliver to the Investor any Regular Purchase Notice, Accelerated Purchase Notice or Additional Accelerated Purchase Notice, and the Investor shall not be obligated to purchase any shares of Common Stock under the Purchase Agreement, during the continuation or pendency of any of the foregoing events; provided, however, that the foregoing shall not affect the Company's or the Investor's rights or obligations under the Purchase Agreement with respect to any then pending Regular Purchases, Accelerated Purchases and Additional Accelerated Purchases, and the Company and the Investor shall complete their respective obligations with respect to any such pending Regular Purchases, Accelerated Purchases and Additional Accelerated Purchases under the Purchase Agreement. If at any time the SEC shall issue any stop order suspending the effectiveness of the Registration Statement or prohibiting or suspending the use of the Prospectus or any Prospectus Supplement, the Company shall use its reasonable best efforts to obtain the withdrawal of such order at the earliest possible time. The Company shall furnish to the Investor, without charge, a copy of any correspondence from the SEC or the staff of the SEC to the Company or its representatives relating to the Registration Statement or the Prospectus, as the case may be.

(b) Investor Review. Except as provided in this Agreement and other than periodic and current reports required to be filed pursuant to the Exchange Act, the Company shall not file with the SEC any amendment to the Registration Statement or any supplement to the Prospectus that refers to the Investor, the Transaction Documents or the transactions contemplated thereby (including, without limitation, any Prospectus Supplement filed in connection with the transactions contemplated by the Transaction Documents), in each case with respect to which (a) the Investor shall not previously have been advised and afforded the opportunity to review and comment thereon at least one (1) Business Day prior to filing with the SEC, as the case may be, (b) the Company shall not have given due consideration to any comments thereon received from the Investor or its counsel, or (c) the Investor shall reasonably object, unless the Company reasonably has determined that it is necessary to amend the Registration Statement or make any supplement to the Prospectus to comply with the Securities Act or any other applicable law or regulation, in which case the Company shall promptly (but in no event later than 24 hours) so inform the Investor, the Investor shall be provided with a reasonable opportunity to review and comment upon any disclosure referring to the Investor, the Transaction Documents or the transactions contemplated thereby, as applicable, and the Company shall expeditiously furnish to the Investor a copy thereof. In addition, for so long as, in the reasonable opinion of counsel for the Investor, the Prospectus is required to be delivered in connection with any acquisition or sale of Securities by the Investor, the Company shall not file any Prospectus Supplement with respect to the Securities without furnishing to the Investor as many copies of such Prospectus Supplement, together with the Prospectus, as the Investor may reasonably request.

(c) Prospectus Delivery. The Company consents to the use of the Prospectus (and of each Prospectus Supplement thereto) in accordance with the provisions of the Securities Act and with the securities or "blue sky" laws of the jurisdictions in which the Securities may be sold by the Investor, in connection with the offering and sale of the Securities and for such period of time thereafter as the Prospectus is required by the Securities Act to be delivered in connection with sales of the Securities. The Company will make available to the Investor upon request, and thereafter from time to time will furnish to the Investor, as many copies of the Prospectus (and each Prospectus Supplement thereto) as the Investor may reasonably request for the purposes contemplated by the Securities Act within the time during which the Prospectus is required by the Securities Act to be delivered in connection with sales of the Securities. If during such period of time any event shall occur that in the reasonable judgment of the Company and its counsel, or in the reasonable judgment of the Investor and its counsel, is required to be set forth in the Registration Statement, the Prospectus or any Prospectus Supplement or should be set forth therein in order to make the statements made therein (in the case of the Prospectus or any Prospectus Supplement, in light of the circumstances under which they were made) not misleading, or if in the reasonable judgment of the Company and its counsel, or in the reasonable judgment of the Investor and its counsel, it is otherwise necessary to amend the Registration Statement or supplement the Prospectus or any Prospectus Supplement to comply with the Securities Act or any other applicable law or regulation, the Company shall forthwith prepare and, subject to Section 3(b) above, file with the SEC an appropriate amendment to the Registration Statement or an appropriate Prospectus Supplement and in each case shall expeditiously furnish to the Investor, at the Company's expense, such amendment to the Registration Statement or such Prospectus Supplement, as applicable, as may be necessary to reflect any such change or to effect such compliance. The Company shall have no obligation to separately advise the Investor of, or deliver copies to the Investor of, the SEC Documents, all of which the Investor shall be deemed to have notice of.

(i) Delivery of Shares. The Company shall cooperate with the Investor to facilitate the timely preparation and delivery of DWAC Shares (not bearing any restrictive legend) representing the Registrable Securities to be offered pursuant to the Registration Statement and the Prospectus and enable such DWAC Shares to be in such denominations or amounts as the Investor may reasonably request and registered in such names as the Investor may request.

(j) Transfer Agent. The Company shall at all times maintain the services of the Transfer Agent with respect to its Common Stock.

(k) Approvals. The Company shall use its reasonable best efforts to cause the Registrable Securities covered by any Registration Statement to be Registered with or approved by such other governmental agencies or authorities in the United States as may be necessary to consummate the disposition of such Registrable Securities.

(l) Confirmation of Effectiveness. If reasonably requested in writing by the Investor at any time, the Company shall deliver to the Investor a written confirmation from Company's counsel of whether or not the effectiveness of such Registration Statement has lapsed at any time for any reason (including, without limitation, the issuance of a stop order) and whether or not the Registration Statement is currently effective and available to the Company for sale of all of the Registrable Securities.

(m) Further Assurances. The Company agrees to take all other reasonable actions as necessary and reasonably requested in writing by the Investor to expedite and facilitate disposition by the Investor of Registrable Securities pursuant to any Registration Statement.

(n) Transfer Agent Instructions. On or before the date the Initial Prospectus Supplement is filed with the SEC, the Company shall issue to the Transfer Agent the Irrevocable Transfer Agent Instructions in the form agreed to prior to the date hereof, and on the date any Registration Statement which includes the Registrable Securities is ordered effective by the SEC, the Company shall deliver, and shall cause legal counsel for the Company to deliver, to the Transfer Agent for such Registrable Securities (with copies to the Investor) confirmation that such Registration Statement has been declared effective by the SEC. Thereafter, if requested by the Investor at any time, the Company shall require its legal counsel to deliver to the Investor a written confirmation whether or not the effectiveness of such Registration Statement has lapsed at any time for any reason (including, without limitation, the issuance of a stop order) and whether or not the Registration Statement is current and available to the Investor for sale of all of the Registrable Securities.

4. OBLIGATIONS OF THE INVESTOR

(a) Investor Information. The Investor has furnished to the Company in Exhibit A hereto such information regarding itself, the Registrable Securities held by it, the Registrable Securities held by it and the intended method of disposition thereof, including any arrangement between the Investor and any other Person relating to the sale or distribution of the Securities, as required to effect the registration of such Registrable Securities and shall execute such documents in connection with such registration as the Company may reasonably request. The Company shall notify the Investor in writing of any other information the Company reasonably requires from the Investor in connection with any Registration Statement hereunder. The Investor will as promptly as practicable notify the Company of any material change in the information set forth in Exhibit A, other than changes in its ownership of Common Stock.

(b) Suspension of Sales. The Investor agrees that, upon receipt of any notice from the Company of the existence of any suspension or stop order as set forth in Section 3(a), the Investor will immediately discontinue disposition of Registrable Securities pursuant to any Registration Statement covering such Registrable Securities until the Investor's receipt of the copies of a notice regarding the resolution or withdrawal of the suspension or stop order as contemplated by Section 3(a). Notwithstanding anything to the contrary, the Company shall cause its transfer agent to promptly deliver to the Investor DWAC Shares without any restrictive legend in accordance with the terms of the Purchase Agreement in connection with any sale of Registrable Securities with respect to which the Investor has entered into a contract for sale prior to the Investor's receipt of a notice from the Company of the happening of any event of the kind described in Section 3(a) and for which the Investor has not yet settled.

(c) Investor Cooperation. The Investor agrees to cooperate with the Company as reasonably requested by the Company in connection with the preparation and filing of any amendments and supplements to any Registration Statement or the Prospectus hereunder.

5. EXPENSES OF REGISTRATION

All reasonable expenses of the Company, other than sales or brokerage commissions and fees and disbursements of counsel for, and other expenses of, the Investor, incurred in connection with registrations, filings or qualifications pursuant to Sections 2 and 3, including, without limitation, all registration, listing and qualifications fees, printers and accounting fees, and fees and disbursements of counsel for the Company, shall be paid by the Company.

6. INDEMNIFICATION.

(a) To the fullest extent permitted by law, the Company will, and hereby does, indemnify, hold harmless and defend the Investor, each Person, if any, who controls the Investor, the members, the directors, officers, partners, employees, agents, representatives of the Investor and each Person, if any, who controls the Investor within the meaning of the Securities Act or the Securities Exchange Act of 1934, as amended (the "Exchange Act") (each, an "Indemnified Person"), against any losses, claims, damages, liabilities, judgments, fines, penalties, charges, costs, attorneys' fees, amounts paid in settlement or expenses, joint or several, (collectively, "Claims") incurred in investigating, preparing or defending any action, claim, suit, inquiry, proceeding, investigation or appeal taken from the foregoing by or before any court or governmental, administrative or other regulatory agency, body or the SEC, whether pending or threatened, whether or not an indemnified party is or may be a party thereto ("Indemnified Damages"), to which any of them may become subject insofar as such Claims (or actions or proceedings, whether commenced or threatened, in respect thereof) arise out of or are based upon: (i) any untrue statement or alleged untrue statement of a material fact contained, or incorporated by reference, in the Registration Statement or any amendment thereto or any omission or alleged omission to state therein, or in any document incorporated by reference therein, a material fact required to be stated therein or necessary to make the statements therein not misleading, (ii) any untrue statement or alleged untrue statement of a material fact contained, or incorporated by reference, in the Prospectus or any Prospectus Supplement, or any omission or alleged omission to state therein, or in any document incorporated by reference therein, a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading, or (iii) any violation or alleged violation by the Company affiliates, officers, directors or employees, of the Securities Act, the Exchange Act, state securities or "Blue Sky" laws, or the rules and regulations of the Principal Market relating to the offer or sale of the Registrable Securities pursuant to the Registration Statement or the Prospectus (the matters in the foregoing clauses (i) through (iii) being, collectively, "Violations"). The Company shall reimburse each Indemnified Person promptly as such expenses are incurred and are due and payable, for any reasonable out-of-pocket legal fees or other reasonable expenses incurred by them in connection with investigating or defending any such Claim. Notwithstanding anything to the contrary contained herein, the indemnification agreement contained in this Section 6(a): (A) shall not apply to a Claim by an Indemnified Person to the extent, but only to the extent, arising out of or based upon any untrue statement or alleged untrue statement or omission or alleged omission made in reliance upon and in conformity with written information furnished to the Company by or on behalf of the Investor expressly for use in any Prospectus Supplement (it being hereby acknowledged and agreed that the written information set forth on Exhibit A attached hereto, as the same may be updated from time to time in writing by the Investor, is the only written information furnished to the Company by or on behalf of the Investor expressly for use in any Prospectus Supplement), if the Prospectus was timely made available by the Company to the Investor pursuant to Section 3(c); (B) shall not be available to the extent such Claim is based on a failure of the Investor to deliver, or to cause to be delivered, the Prospectus made available by the Company, if such Prospectus was theretofore made available by the Company pursuant to Section 3(c), and if delivery of the Prospectus would have cured the defect giving rise to such Claim; and (C) shall not apply to amounts paid in settlement of any Claim if such settlement is effected without the prior written consent of the Company, which consent shall not be unreasonably withheld, delayed or conditioned. Such indemnity shall remain in full force and effect regardless of any investigation made by or on behalf of the Indemnified Person and shall survive the transfer of the Registrable Securities by the Investor pursuant to Section 8.

(b) In connection with any Prospectus Supplement, the Investor agrees to indemnify, hold harmless and defend, to the same extent and in the same manner as is set forth in Section 6(a), the Company, each of its directors, each of its officers who signed the Registration Statement, and each Person, if any, who controls the Company within the meaning of the Securities Act or the Exchange Act (collectively and together with an Indemnified Person, an “Indemnified Party”), against any Claim or Indemnified Damages to which any of them may become subject, under the Securities Act, the Exchange Act or otherwise, insofar as such Claim or Indemnified Damages arise out of or are based upon any Violation, in each case to the extent, and only to the extent, that such Violation occurs in reliance upon and in conformity with written information about the Investor set forth on **Exhibit A** attached hereto (as the same may be updated from time to time in writing by the Investor) and furnished to the Company by the Investor expressly for inclusion any Prospectus Supplement; and, subject to Section 6(d), the Investor will reimburse any reasonable out-of-pocket legal or other expenses reasonably incurred by them in connection with investigating or defending any such Claim; provided, however, that the indemnity agreement contained in this Section 6(b) and the agreement with respect to contribution contained in Section 7 shall not apply to amounts paid in settlement of any Claim if such settlement is effected without the prior written consent of the Investor, which consent shall not be unreasonably withheld, delayed or conditioned; and provided, further, that the Investor shall be liable under this Section 6(b) for only that amount of a Claim or Indemnified Damages as does not exceed the net proceeds to the Investor as a result of the sale of Registrable Securities pursuant to such Registration Statement. Such indemnity shall remain in full force and effect regardless of any investigation made by or on behalf of such Indemnified Party and shall survive the transfer of the Registrable Securities by the Investor pursuant to Section 8.

(c) Promptly after receipt by an Indemnified Person or Indemnified Party under this Section 6 of notice of the commencement of any action or proceeding (including any governmental action or proceeding) involving a Claim, such Indemnified Person or Indemnified Party shall, if a Claim in respect thereof is to be made against any indemnifying party under this Section 6, deliver to the indemnifying party a written notice of the commencement thereof, and the indemnifying party shall have the right to participate in, and, to the extent the indemnifying party so desires, jointly with any other indemnifying party similarly noticed, to assume control of the defense thereof with counsel mutually satisfactory to the indemnifying party and the Indemnified Person or the Indemnified Party, as the case may be; provided, however, that an Indemnified Person or Indemnified Party shall have the right to retain its own counsel with the fees and expenses to be paid by the indemnifying party, if, in the reasonable opinion of counsel retained by the indemnifying party, the representation by such counsel of the Indemnified Person or Indemnified Party and the indemnifying party would be inappropriate due to actual or potential differing interests between such Indemnified Person or Indemnified Party and any other party represented by such counsel in such proceeding. The Indemnified Party or Indemnified Person shall cooperate with the indemnifying party in connection with any negotiation or defense of any such action or claim by the indemnifying party and shall furnish to the indemnifying party all information reasonably available to the Indemnified Party or Indemnified Person which relates to such action or claim. The indemnifying party shall keep the Indemnified Party or Indemnified Person fully apprised as to the status of the defense or any settlement negotiations with respect thereto. No indemnifying party shall be liable for any settlement of any action, claim or proceeding effected without its written consent, provided, however, that the indemnifying party shall not unreasonably withhold, delay or condition its consent. No indemnifying party shall, without the consent of the Indemnified Party or Indemnified Person, consent to entry of any judgment or enter into any settlement or other compromise which does not include as an unconditional term thereof the giving by the claimant or plaintiff to such Indemnified Party or Indemnified Person of a release from all liability in respect to such claim or litigation. Following indemnification as provided for hereunder, the indemnifying party shall be subrogated to all rights of the Indemnified Party or Indemnified Person with respect to all third parties, firms or corporations relating to the matter for which indemnification has been made. 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 Person or Indemnified Party under this Section 6, except to the extent that the indemnifying party is prejudiced in its ability to defend such action.

(d) The indemnification required by this Section 6 shall be made by periodic payments of the amount thereof during the course of the investigation or defense, as and when bills are received or Indemnified Damages are incurred. Any Person receiving a payment pursuant to this Section 6 which person is later determined to not be entitled to such payment shall return such payment to the person making it.

(e) The indemnity agreements contained herein shall be in addition to (i) any cause of action or similar right of the Indemnified Party or Indemnified Person against the indemnifying party or others, and (ii) any liabilities the indemnifying party may be subject to pursuant to the law.

7. CONTRIBUTION.

To the extent any indemnification by an indemnifying party is prohibited or limited by law, the indemnifying party agrees to make the maximum contribution with respect to any amounts for which it would otherwise be liable under Section 6 to the fullest extent permitted by law; provided, however, that: (i) no seller of Registrable Securities guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any seller of Registrable Securities who was not guilty of fraudulent misrepresentation; and (ii) contribution by any seller of Registrable Securities shall be limited in amount to the net amount of proceeds received by such seller from the sale of such Registrable Securities.

8. ASSIGNMENT OF REGISTRATION RIGHTS.

The Company shall not assign this Agreement or any rights or obligations hereunder without the prior written consent of the Investor; provided, however, that any transaction, whether by merger, reorganization, restructuring, consolidation, financing or otherwise, whereby the Company remains the surviving entity immediately after such transaction shall not be deemed an assignment. The Investor may not assign its rights under this Agreement without the prior written consent of the Company, other than to an affiliate of the Investor controlled by Jonathan Cope or Joshua Scheinfeld, in which case the assignee must agree in writing to be bound by the terms and conditions of this Agreement.

9. AMENDMENT OR WAIVER OF REGISTRATION RIGHTS.

No provision of this Agreement may be (i) amended other than by a written instrument signed by both parties hereto or (ii) waived other than in a written instrument signed by the party against whom enforcement of such waiver is sought. Failure of any party to exercise any right or remedy under this Agreement or otherwise, or delay by a party in exercising such right or remedy, shall not operate as a waiver thereof.

10. MISCELLANEOUS.

(a) Holder. A Person is deemed to be a holder of Registrable Securities whenever such Person owns or is deemed to own of record such Registrable Securities. If the Company receives conflicting instructions, notices or elections from two or more Persons with respect to the same Registrable Securities, the Company shall act upon the basis of instructions, notice or election received from the registered owner of such Registrable Securities.

(b) Notices. Any notices, consents, waivers or other communications required or permitted to be given under the terms of this Agreement must be in writing and will be deemed to have been delivered: (i) upon receipt, when delivered personally; (ii) upon receipt, when sent by facsimile or email (provided confirmation of transmission is mechanically or electronically generated and kept on file by the sending party); or (iii) one (1) Business Day after deposit with a nationally recognized overnight delivery service, in each case properly addressed to the party to receive the same. The addresses for such communications shall be:

If to the Company:

Ocuphire Pharma, Inc.
37000 Grand River Avenue, Suite 120
Farmington Hills, MI 48335
Telephone: (248) 957-9024
E-mail: rrodgers@ocuphire.com
Attention: Richard J. Rodgers
Interim President and Chief Executive Officer

With a copy to (which shall not constitute notice or service of process):

Honigman LLP
650 Trade Center Way, Suite 200
Kalamazoo, MI 49002-0402
Telephone: (269) 337-7700
E-mail: ptorrence@honigman.com
Attention: Phillip D. Torrence, Esq.

If to the Investor:

Lincoln Park Capital Fund, LLC
440 North Wells, Suite 410
Chicago, IL 60654
Telephone: (312) 822-9300
Facsimile: (312) 822-9301
E-mail: jscheinfeld@lpcfunds.com/jcope@lpcfunds.com
Attention: Josh Scheinfeld/Jonathan Cope

With a copy to (which shall not constitute notice or service of process):

Reed Smith LLP
599 Lexington Avenue
New York, NY 10022
Telephone: (212) 549-0285
Facsimile: (212) 521-5450
E-mail: amarsico@reedsmith.com
Attention: Anthony J. Marsico, Esq.

or at such other address, email address and/or facsimile number and/or to the attention of such other person as the recipient party has specified by written notice given to each other party three (3) Business Days prior to the effectiveness of such change. Written confirmation of receipt (A) given by the recipient of such notice, consent, waiver or other communication, (B) mechanically or electronically generated by the sender's facsimile machine or email account containing the time, date, recipient facsimile number or email address, as applicable, and an image of the first page of such transmission or (C) provided by a nationally recognized overnight delivery service, shall be rebuttable evidence of personal service, receipt by facsimile or receipt from a nationally recognized overnight delivery service in accordance with clause (i), (ii) or (iii) above, respectively.

(c) Governing Law. The corporate laws of the State of Delaware shall govern all issues concerning the relative rights of the Company and its stockholders. All other questions concerning the construction, validity, enforcement and interpretation of this Agreement shall be governed by the internal laws of the State of Illinois, without giving effect to any choice of law or conflict of law provision or rule (whether of the State of Illinois or any other jurisdictions) that would cause the application of the laws of any jurisdictions other than the State of Illinois. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting the State of Illinois, County of Cook, for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, 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, that such suit, action or proceeding is brought in an inconvenient forum or that the venue of such suit, action or proceeding is improper. Each party 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 to such party at the address for such 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. If any provision of this Agreement shall be invalid or unenforceable in any jurisdiction, such invalidity or unenforceability shall not affect the validity or enforceability of the remainder of this Agreement in that jurisdiction or the validity or enforceability of any provision of this Agreement in any other jurisdiction. **EACH PARTY HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE, AND AGREES NOT TO REQUEST, A JURY TRIAL FOR THE ADJUDICATION OF ANY DISPUTE HEREUNDER OR IN CONNECTION HEREWITH OR ARISING OUT OF THIS AGREEMENT OR ANY TRANSACTION CONTEMPLATED HEREBY.**

(d) Integration. This Agreement, the Purchase Agreement and the other Transaction Documents constitute the entire understanding among the parties hereto with respect to the subject matter hereof and thereof. There are no restrictions, promises, warranties or undertakings, other than those set forth or referred to herein and therein. This Agreement, the Purchase Agreement and the other Transaction Documents supersede all other prior oral or written agreements between the Investor, the Company, their affiliates and persons acting on their behalf with respect to the subject matter hereof and thereof.

(e) No Third Party Beneficiaries. This Agreement is intended for the benefit of the parties hereto and any permitted successors and assigns of the Company and, except as set forth in Section 9, is not for the benefit of, nor may any provision hereof be enforced by, any other Person.

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

(g) Counterparts. This Agreement may be executed in two or more identical counterparts, all of which 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; provided that a facsimile signature or signature delivered by e-mail in a “.pdf” format data file, including any electronic signature complying with the U.S. federal ESIGN Act of 2000, e.g., www.docuSign.com, www.echosign.adobe.com, etc., shall be considered due execution and shall be binding upon the signatory thereto with the same force and effect as if the signature were an original signature.

(h) Further Assurances. Each party shall do and perform, or cause to be done and performed, all such further acts and things, and shall execute and deliver all such other agreements, certificates, instruments and documents, as the other party may reasonably request in order to carry out the intent and accomplish the purposes of this Agreement and the consummation of the transactions contemplated hereby.

(i) No Strict Construction. 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.

*** Signature Page Follows ***

IN WITNESS WHEREOF, the parties have caused this Registration Rights Agreement to be duly executed as of day and year first above written.

THE COMPANY:

OCUPHIRE PHARMA, INC.

By: /s/ Richard J. Rodgers
Name: Richard J. Rodgers
Title: Interim President and Chief Executive Officer

INVESTOR:

LINCOLN PARK CAPITAL FUND, LLC
BY: LINCOLN PARK CAPITAL, LLC
BY: ROCKLEDGE CAPITAL CORPORATION

By: /s/ Joshua Scheinfeld
Name: Joshua Scheinfeld
Title: President

EXHIBIT A

Information About The Investor Furnished To The Company By The Investor Expressly For Use In Connection With Each Registration Statement and Prospectus Supplement

Information With Respect to Lincoln Park Capital

As of the date of the Purchase Agreement, Lincoln Park Capital Fund, LLC beneficially owned 246,792 shares of our common stock. Josh Scheinfeld and Jonathan Cope, the Managing Members of Lincoln Park Capital, LLC, the manager of Lincoln Park Capital Fund, LLC, are deemed to be beneficial owners of all of the shares of common stock owned by Lincoln Park Capital Fund, LLC. Messrs. Cope and Scheinfeld have shared voting and investment power over the shares being offered under the prospectus supplement filed with the SEC in connection with the transactions contemplated under the Purchase Agreement. Neither Lincoln Park Capital, LLC nor Lincoln Park Capital Fund, LLC is a licensed broker dealer or an affiliate of a licensed broker dealer.



Ocuphire Pharma Announces Financial Results for Second Quarter 2023 and Provides Corporate Update

End-of-Phase 2 Meeting with FDA Scheduled for Q4 2023 for Oral APX3330 in Diabetic Retinopathy (DR)

Cash Balance of \$40 Million Expected to Fund Operations into 2025

Nyxol RM PDUFA date September 28, 2023; Approval would trigger \$10 million milestone payment to Ocuphire

Common Share Purchase Agreement with Lincoln Park Capital Fund, LLC providing up to \$50 million in committed financing over 30 months

FARMINGTON HILLS, Mich., August 11, 2023 (GLOBE NEWSWIRE) – Ocuphire Pharma, Inc. (Nasdaq: OCUP), a clinical-stage ophthalmic biopharmaceutical company focused on developing and commercializing small-molecule therapies for the treatment of retinal and refractive eye disorders, today announced financial results for the second quarter ended June 30, 2023, and provided a corporate update.

“We continue to advance the development of oral APX3330 for diabetic retinopathy, as we prepare for our End-of-Phase 2 meeting with the FDA in the fourth quarter of 2023,” said Rick Rodgers, Interim Chief Executive Officer. “We intend to confirm with the Agency our Phase 3 registration endpoint and path to a potential approval. In the meantime, we continue to present at prominent medical forums the results from the ZETA-1 Phase 2 trial of APX3330, which demonstrated prevention of 3-step binocular worsening as measured on the diabetic retinopathy severity scale, our anticipated Phase 3 registration endpoint. If approved, we believe that APX3330 has the potential to shift the current wait-and-watch deferred treatment paradigm for NPDR without DME and be the first non-invasive, oral, early treatment for the 8 million NPDR patients who are at risk of progressing to vision-threatening complications. We are also pleased to enter into a common share purchase agreement with Lincoln Park Capital Fund, providing us with additional financial flexibility to fund further development of APX3330.”

Key Anticipated Future Milestones

- **APX3330:** End-of-Phase 2 (EOP2) meeting scheduled with FDA to confirm Phase 3 regulatory path for oral APX3330 in DR (Q4 2023)

- **Nyxo**: PDUFA date for Nyxo in RM (September 28, 2023). FDA approval in RM would trigger a \$10 million milestone payment to Ocuphire
- **Nyxo**: Topline results from VEGA-2 Phase 3 pivotal trial of Nyxo in Presbyopia (Q4 2023)

Recent Business Highlights

Clinical and Regulatory Updates

In July 2023, Ocuphire confirmed an End-of-Phase 2 meeting with the FDA, scheduled for the fourth quarter of 2023. On the strength of the efficacy and safety data from the ZETA-1 Phase 2 trial of APX3330, and upon agreement with the FDA following the End-of-Phase 2 meeting, Ocuphire plans to pursue binocular 3-step or more worsening (prevention of progression) of diabetic retinopathy severity score (DRSS) as the potential registration primary endpoint.

Corporate

On August 10, 2023, Ocuphire entered into a common share purchase agreement (the "Purchase Agreement") with Lincoln Park Capital Fund, LLC (LPC), an institutional investor. Subject to the terms and conditions of the Purchase Agreement, Ocuphire has the right to sell, and LPC is obligated to purchase, up to \$50 million of Ocuphire's common shares over a 30-month period at prices per share as computed under the Purchase Agreement. Ocuphire, in its sole discretion, controls the timing and amount of all sales of common shares within a pre-specified range and there are no warrants or other share classes associated with the Purchase Agreement. Proceeds from share sales are expected to fund future development of APX3330 and to be used for general corporate purposes.

Additional information regarding the Purchase Agreement with LPC will be available in a Current Report on Form 8-K to be filed with the Securities and Exchange Commission.

Presentations, Publications, and Conferences

In the second quarter of 2023, several papers, posters, and panel talks were presented at medical and industry conferences with updates on APX3330 in DR and Nyxo in RM, DLD and Presbyopia. Highlights include:

- A late-breaking poster and ePoster theater presentation featured results from ZETA-1 Phase 2 trial of APX3330 in DR at the 83^d Scientific Sessions of the American Diabetes Association (ADA) in June 2023.
 - Previously announced results from ZETA-1 Phase 2 trial of APX3330 in DR were presented to the medical community at the ASCRS Annual Meeting in May 2023.
 - Results from LYNX-1 Phase 3 trial of Nyxo in DLD were presented for the first time to the medical community at the Association for Research in Vision and Ophthalmology (ARVO) Annual Meeting in April 2023, and at the American Society of Cataract and Refractive Surgery (ASCRS) Annual Meeting in May 2023.
-

Second Quarter ended June 30, 2023 Financial Highlights

As of June 30, 2023, Ocuphire had cash and cash equivalents of approximately \$40.0 million. The Company has no debt. Based on current projections, management believes the present cash on hand will be sufficient to fund operations into 2025.

License and collaborations revenue was \$3.7 million and \$5.4 million for the three and six months ended June 30, 2023, respectively. There was no license and collaborations revenue during the three and six months ended June 30, 2022. Revenue during the current year three and six month periods was derived primarily from the reimbursement of research and development services under the Nyxol License Agreement.

General and administrative expenses for the three and six months ended June 30, 2023 were \$4.3 million and \$6.6 million, respectively, compared to \$1.8 million and \$3.5 million, respectively, for the three and six months ended June 30, 2022. The increases from the comparable periods in 2022 were attributable to severance costs associated with the departure of our former Chief Executive Officer, stock-based compensation, professional services, legal support and personnel related and other costs. General and administrative expenses included stock-based compensation expenses.

Research and development expenses for the three and six months ended June 30, 2023 were \$4.7 million and \$10.3 million, respectively, compared to \$3.2 million and \$7.9 million, respectively, for the three and six months ended June 30, 2022. The increases from the comparable periods in 2022 were primarily attributable to increased clinical costs of for Nyxol and APX3330 period over period as well as increased consulting and other costs during the current period. Research and development expenses also included stock-based compensation expenses.

The loss from operations for the three and six months ended June 30, 2023, was \$5.4 million and \$11.5 million, respectively, compared \$4.9 million and \$11.4 million, respectively, for the three and six months ended June 30, 2022.

Net loss for the three and six months ended June 30, 2023, was \$5.0 million and \$10.8 million, respectively, compared to \$4.9 million and \$11.5 million, respectively, for the three and six months ended June 30, 2022. Net loss per share for the three and six months ended June 30, 2023, was (\$0.24) and (\$0.51) per share, respectively, compared to (\$0.25) and (\$0.60) per share, respectively, for the comparable periods in 2022.

For further details on Ocuphire's financial results, refer to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2023 to be filed with the Securities and Exchange Commission.

About Ocuphire Pharma

Ocuphire Pharma, Inc. is a clinical-stage ophthalmic biopharmaceutical company focused on developing and commercializing small-molecule therapies for the treatment of retinal and refractive eye disorders.

Ocuphire's lead retinal product candidate, APX3330, is a first-in-class small-molecule inhibitor of Ref-1 (reduction oxidation effector factor-1 protein). Ref-1 is a regulator of transcription factors such as HIF-1 α and NF- κ B. Inhibiting REF-1 reduces levels of vascular endothelial growth factor (VEGF) and inflammatory cytokines which are known to play key roles in ocular angiogenesis and inflammation. Through inhibition of Ref-1, APX3330 normalizes the levels of VEGF to physiologic levels, unlike biologics that abolish the VEGF levels required for normal function. APX3330 is an oral tablet administered twice per day for the treatment of diabetic retinopathy ("DR") and diabetic macular edema ("DME"). A Phase 2 study in subjects with DR or DME has recently completed, and an End-of-Phase 2 meeting is confirmed with the FDA in Q4 2023.

DR affects approximately 10 million people with diabetes and is projected to impact 14.6 million Americans by 2050. DR is classified as Non-Proliferative Diabetic Retinopathy ("NPDR"), the early stage of the disease in which symptoms may be mild or nonexistent or Proliferative Diabetic Retinopathy ("PDR") which is the more advanced stage of diabetic eye disease that can be highly symptomatic with loss of vision. Approximately 80% of DR patients have NPDR that will progress to PDR if left untreated. Despite the risk for visual loss associated with this disease, over 90% of NPDR patients currently receive no course of treatment apart from observation by their eye care specialist until they develop sight-threatening complications. This is due to the burdensome and frequent eye injections currently required with currently approved therapies for this disease. APX3330 as an oral tablet has the potential to be an early, non-invasive treatment for the 8 million NPDR patients in the US. Treatment with APX3330 is expected to delay or prevent progression of NPDR, thereby reducing the need for expensive intravitreal injections with anti-VEGF therapies and reducing the likelihood of vision loss due to DR.

Ocuphire has also in-licensed APX2009 and APX2014, which are second-generation analogs of APX3330. The unique dual mechanism of action of these Ref-1 inhibitors of reducing angiogenesis and inflammation could potentially be beneficial in treating other retinal diseases such as age-related macular degeneration ("AMD"), and geographic atrophy ("GA"). Ocuphire is currently evaluating local delivery routes in addition to the systemic (oral) route as part of its pipeline expansion in retinal therapies.

Ocuphire has a partnership with Viartis, Inc. to develop and commercialize Nyxo[®] eye drops as a preservative-free eye drop formulation of phentolamine mesylate, a non-selective alpha-1 and alpha-2 adrenergic antagonist designed to reduce pupil size by uniquely blocking the alpha-1 receptors found only on the iris dilator muscle without affecting the ciliary muscle. Nyxol has been studied in a total of 12 clinical trials across three indications, including single-use for reversal of pharmacologically-induced mydriasis ("RM"), and once-daily for treatment of presbyopia and dim light (night) vision disturbances ("DLD"), pending regulatory approvals. Nyxol's NDA under the 505(b)(2) pathway for the first indication, RM, has been accepted with a PDUFA date assigned of September 28, 2023. Nyxol is currently in Phase 3 for presbyopia and DLD.

For more information, visit www.ocuphire.com.

Forward Looking Statements

Statements contained in this press release regarding matters that are not historical facts are “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements include, but are not limited to, statements concerning the End-of-Phase 2 meeting with the FDA to confirm Phase 3 registration endpoints and study parameters, and the potential receipt of regulatory approval for Nyxol for the treatment of RM. These forward-looking statements are based upon Ocuphire’s current expectations and involve assumptions that may never materialize or may prove to be incorrect. Actual results and the timing of events could differ materially from those anticipated in such forward-looking statements as a result of various risks and uncertainties, including, without limitation: (i) the success and timing of regulatory submissions and pre-clinical and clinical trials, including enrollment and data readouts; (ii) regulatory requirements or developments; (iii) changes to clinical trial designs and regulatory pathways; (iv) changes in capital resource requirements; (v) risks related to the inability of Ocuphire to obtain sufficient additional capital to continue to advance its product candidates and its preclinical programs; (vi) legislative, regulatory, political and economic developments, (vii) changes in market opportunities, (viii) the effects of COVID-19 on clinical programs and business operations, (ix) risks that the Nyxol partnership may not facilitate the commercialization or market acceptance of Ocuphire’s product candidates; (x) the success and timing of commercialization of any of Ocuphire’s product candidates and (xi) the maintenance of Ocuphire’s intellectual property rights. The foregoing review of important factors that could cause actual events to differ from expectations should not be construed as exhaustive and should be read in conjunction with statements that are included herein and elsewhere, including the risk factors detailed in documents that have been and may be filed by Ocuphire from time to time with the SEC. All forward-looking statements contained in this press release speak only as of the date on which they were made. Ocuphire undertakes no obligation to update such statements to reflect events that occur or circumstances that exist after the date on which they were made.

Contacts

Corporate	Investor Relations
Rick Rodgers Interim President & CEO ir@ocuphire.com	Corey Davis, Ph.D. LifeSci Advisors cdavis@lifesciadvisors.com

Ocuphire Pharma, Inc.
Condensed Balance Sheets
(in thousands, except share amounts and par value)

	As of	
	June 30, 2023 (unaudited)	December 31, 2022
Assets		
Current assets:		
Cash and cash equivalents	\$ 39,977	\$ 42,634
Accounts receivable	135	1,298
Contract assets and unbilled receivables	2,595	3,552
Prepays and other current assets	732	1,453
Short-term investments	22	49
Total current assets	43,461	48,986
Property and equipment, net	4	6
Total assets	\$ 43,465	\$ 48,992
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	\$ 2,323	\$ 1,069
Accrued expenses	3,438	1,684
Total current liabilities	5,761	2,753
Total liabilities	5,761	2,753
Commitments and contingencies		
Stockholders' equity		
Preferred stock, par value \$0.0001; 10,000,000 shares authorized as of June 30, 2023 and December 31, 2022; no shares issued and outstanding at June 30, 2023 and December 31, 2022.	—	—
Common stock, par value \$0.0001; 75,000,000 shares authorized as of June 30, 2023 and December 31, 2022; 20,985,784 and 20,861,315 shares issued and outstanding at June 30, 2023 and December 31, 2022, respectively.	2	2
Additional paid-in capital	119,934	117,717
Accumulated deficit	(82,232)	(71,480)
Total stockholders' equity	37,704	46,239
Total liabilities and stockholders' equity	\$ 43,465	\$ 48,992

Ocuphire Pharma, Inc.
Condensed Statements of Comprehensive Loss
(in thousands, except share and per share amounts)
(Unaudited)

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
	2023	2022	2023	2022
License and collaborations revenue	\$ 3,674	\$ —	\$ 5,423	\$ —
Operating expenses:				
General and administrative	4,340	1,776	6,625	3,512
Research and development	4,723	3,162	10,318	7,934
Total operating expenses	9,063	4,938	16,943	11,446
Loss from operations	(5,389)	(4,938)	(11,520)	(11,446)
Interest expense	—	(4)	—	(9)
Other income (expense), net	428	15	768	(67)
Loss before income taxes	(4,961)	(4,927)	(10,752)	(11,522)
Benefit (provision) for income taxes	—	—	—	—
Net loss	(4,961)	(4,927)	(10,752)	(11,522)
Other comprehensive loss, net of tax	—	—	—	—
Comprehensive loss	\$ (4,961)	\$ (4,927)	\$ (10,752)	\$ (11,522)
Net loss per share:				
Basic and diluted	\$ (0.24)	\$ (0.25)	\$ (0.51)	\$ (0.60)
Number of shares used in per share calculations:				
Basic and diluted	20,959,807	19,502,563	20,949,763	19,197,213