

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

FORM 8-K

CURRENT REPORT
PURSUANT TO SECTION 13 OR 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934

Date of Report (Date of earliest event reported): September 20, 2021

LIXTE BIOTECHNOLOGY HOLDINGS, INC.

DELAWARE
(State or other jurisdiction of incorporation)

001-39717
(Commission
File Number)

20-2903526
(IRS Employer
Identification No.)

680 East Colorado Blvd., Suite 180
Pasadena, California 91101
(Address of principal executive offices)

(631) 830-7092
(Registrant's telephone number, including area code)

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 (See General Instruction A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act of 1933 (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(e) 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(s)	Name of each exchange on which registered
Common Stock	LIXT	The Nasdaq Stock Market LLC
Warrant to Purchase Common Stock	LIXTW	The Nasdaq Stock Market LLC

Item 1.01 Entry into a Material Definitive Agreement.

At-the-Market Sales Agreement

On September 20, 2021, Lixte Biotechnology Holdings, Inc. (“we,” “our” or the “Company”) entered into an at-the-market sales agreement (the “Sales Agreement”) with WestPark Capital, Inc. (the “Agent”) pursuant to which we may offer and sell from time to time through the Agent, acting as agent, shares of our common stock, \$0.0001 par value per share, having an aggregate offering price of up to \$10,000,000, subject to the terms and conditions of the Agreement. The issuance and sale, if any, of shares of common stock through the Agent under the Sales Agreement will be made pursuant to the Company’s effective shelf registration statement on Form S-3 (File No. 333-252430) (the “Registration Statement”) filed with the Securities and Exchange Commission, or “SEC,” on January 26, 2021, and declared effective on February 5, 2021, and are described in detail in the related base prospectus, dated February 5, 2021 and prospectus supplement, dated September 20, 2021, included as part of our Registration Statement.

Under the sales agreement, the Agent may sell shares of our common stock by any method permitted by law deemed to be an “at-the-market” offering as defined in Rule 415 of the Securities Act of 1933, as amended, including, but not limited to, sales made directly on the Nasdaq Capital Market, on any other existing trading market for our common stock or to or through a market maker other than on an exchange or otherwise, in negotiated transactions at market prices prevailing at the time of sale or at prices related to such prevailing market prices, and/or any other method permitted by law. The Agent has agreed in the sales agreement to use its commercially reasonable efforts consistent with its respective normal trading and sales practices to sell shares in accordance with our instructions (including any price, time or size limit or other customary parameters or conditions we may impose). Actual sales will depend on a variety of factors to be determined by the Company from time to time, including (among others) market conditions, the trading price of the Company’s common stock, capital needs and determinations by the Company of the appropriate sources of funding for the Company. The Company is not obligated to make any sales of common stock under the Sales Agreement and the Company cannot provide any assurances that it will issue any shares pursuant to the Sales Agreement.

We have agreed to pay the Agent a commission rate of 2.5% of the gross sales price per share of any of our shares of common stock sold through the Agent under the sales agreement, and have provided the Agent with customary indemnification and contribution rights. In addition, we have agreed to reimburse certain legal expenses and filing fees incurred by the Agent in connection with the offering pursuant to the Sales Agreement, including fees and expenses of the Agent’s legal counsel not to exceed \$50,000, plus certain ongoing disbursements of its legal counsel up to \$1,250 per calendar quarter.

The offering of shares of our common stock pursuant to the Sales Agreement will terminate upon the earliest of (i) the sale of the maximum dollar amount of shares of common stock subject to the Sales Agreement, (ii) the termination of the Sales Agreement by us or the Agent, and (iii) the expiration of the shelf registration statement on Form S-3 (File No. 333-252430) on the third anniversary of the initial effective date of such registration statement.

A copy of the Sales Agreement is filed as Exhibit 10.1 to this Current Report on Form 8-K (this "Report") and is incorporated herein by reference. The description of the Agreement is qualified in its entirety by reference to Exhibit 10.1 to this Report.

This Report, including the exhibits filed herewith, is not an offer to sell or the solicitation of an offer to buy the shares or any other securities of the Company, nor shall there be any offer, solicitation or sale of the shares or any other securities of the Company in any state in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of such state.

A copy of the opinion of TroyGould PC relating to the legality of the shares is filed as Exhibit 5.1 to this Report and is filed with reference to, and is hereby incorporated by reference into, the Registration Statement.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

We are filing as part of this Report the exhibits listed on the accompanying Index to Exhibits, which information is incorporated herein by reference.

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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.

Date: September 20, 2021

LIXTE BIOTECHNOLOGY HOLDINGS, INC.

By: /s/ JOHN S. KOVACH

John S. Kovach, President and Chief Executive
Officer

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INDEX TO EXHIBITS

Exhibit No.	Description
5.1	Opinion of TroyGould PC
10.1	Sales Agreement dated as of September 20, 2021 between Lixte Biotechnology Holdings, Inc. and WestPark Capital, Inc.
23.1	Consent of TroyGould PC (included in Exhibit 5.1)
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

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TroyGould PC
1801 Century Park East, Suite 1600
Los Angeles, California 90067

September 20, 2021

Lixte Biotechnology Holdings, Inc.
680 East Colorado Blvd., Suite 180
Pasadena, California 91101

Re: Registration Statement on Form S-3; Shares of Common Stock, \$0.0001 par value per share, having an aggregate offering price of up to \$10,000,000

Ladies and Gentlemen:

We have acted as counsel to Lixte Biotechnology Holdings, Inc. a Delaware corporation (the "Company"), in connection with the sale by the Company of shares (the "Shares") of common stock, \$0.0001 par value per share (the "Common Stock") having an aggregate offering price of up to \$10,000,000, pursuant to (i) a registration statement on Form S-3 (the "Registration Statement"), under the Securities Act of 1933, as amended (the "Act"), filed with the Securities and Exchange Commission (the "Commission") on January 26, 2021, (ii) a base prospectus (the "Base Prospectus") and a related prospectus supplement included in the Registration Statement (together with the Base Prospectus, the "Prospectus"), and (iii) a Sales Agreement, dated as of September 20, 2021, and between the Company and WestPark Capital, Inc. (the "ATM Agreement"). This opinion letter is being furnished in connection with the requirements of Item 601(b)(5) of Regulation S-K under the Act, and no opinion is expressed herein as to any matter pertaining to the contents of the Registration Statement or the Prospectus, other than as expressly stated herein with respect to the issue of the Shares.

As such counsel, we have examined such matters of fact and questions of law as we have considered appropriate for purposes of this opinion letter. With your consent, we have relied upon certificates and other assurances of officers of the Company and others as to factual matters without having independently verified such factual matters. We are opining herein as to the General Corporation Law of the State of Delaware and we express no opinion with respect to the applicability thereto, or the effect thereon, of the laws of any other jurisdiction or, in the case of Delaware, any other laws, or as to any matters of municipal law or the laws of any local agencies within any state.

Subject to the foregoing and the other matters set forth herein, it is our opinion that, when the Shares shall have been duly registered on the books of the transfer agent and registrar therefor in the name or on behalf of the purchasers, upon issuance, delivery and payment therefor in an amount not less than the par value thereof in the circumstances contemplated by the ATM Agreement, the issue and sale of the Shares will have been duly authorized by all necessary corporate action of the Company and such Shares will be validly issued, fully paid and nonassessable.

With your permission, we have made (and are relying upon) the following assumptions, without any independent investigation or inquiry by us, and our opinions expressed above are subject to, and limited and qualified by the effect of, the following assumptions: (1) the Company will comply with all applicable notice requirements regarding uncertificated shares provided in the General Corporation Law of the State of Delaware, (2) upon the issue of any of the Shares, the total number of shares of Common Stock issued and outstanding will not exceed the total number of shares of Common Stock that the Company is then authorized to issue under its Amended and Restated Certificate of Incorporation; (3) all representations, warranties, and other statements as to factual matters that are contained in the documents that we reviewed in connection with this opinion letter are accurate and complete, and all corporate records furnished to us by the Company are accurate and complete; and (4) with respect to documents that we reviewed in connection with this opinion letter, all documents submitted to us as originals are authentic and complete; all documents submitted to us as certified, electronic, facsimile, or photostatic copies conform to the originals of such documents, and such original documents are authentic and complete; the signatures on all documents are genuine; and all natural persons who have executed any of the documents have the legal capacity to do so.

This opinion letter is rendered to you in connection with the Registration Statement and may not be relied upon by you for any other purpose. We consent to your filing this opinion letter as an exhibit to the Registration Statement and to the reference to our firm contained in the Registration Statement and the Prospectus under the heading "Legal Matters." In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission thereunder.

Very truly yours,

/s/ TROYGOULD PC
TROYGOULD PC

LIXTE BIOTECHNOLOGY HOLDINGS, INC.

COMMON STOCK

SALES AGREEMENT

September 20, 2011

WestPark Capital, Inc.
1900 Avenue of the Stars, Suite 310
Los Angeles, California 90067

Ladies and Gentlemen:

Lixte Biotechnology Holdings, Inc., a Delaware corporation (the “**Company**”), confirms its agreement (this “**Agreement**”) with WestPark Capital, Inc., as follows:

1. **Issuance and Sale of Shares.** The Company agrees that, from time to time during the term of this Agreement, on the terms and subject to the conditions set forth herein, it may issue and sell to or through WestPark Capital, Inc., acting as agent and/or principal (the “**Sales Agent**”), shares of the Company’s common stock, par value \$0.001 per share (the “**Common Stock**”), subject to the limitations set forth in **Section 3(b)** hereof. The issuance and sale of shares of Common Stock to or through the Sales Agent will be effected pursuant to the Registration Statement (as defined below) filed by the Company and which was declared effective under the Securities Act (as defined below) by the U.S. Securities and Exchange Commission (the “**Commission**”).

The Company has filed, in accordance with the provisions of the Securities Act of 1933, as amended, and the rules and regulations thereunder (collectively, the “**Securities Act**”), with the Commission, a shelf registration statement on Form S-3, including a base prospectus, relating to certain securities, including the Common Stock, to be issued from time to time by the Company, and which incorporates by reference documents that the Company has filed or will file in accordance with the provisions of the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder (collectively, the “**Exchange Act**”). The Company has prepared a prospectus supplement specifically relating to the offering of Common Stock pursuant to this Agreement included as part of such registration statement (the “**ATM Prospectus**”). As soon as practicable following the date that such registration statement is declared effective, the Company will furnish to the Sales Agent, for use by the Sales Agent, copies of the ATM Prospectus included as part of such registration statement, relating to the Placement Shares (as defined below). Except where the context otherwise requires, such registration statement, as amended when it becomes effective, including all documents filed as part thereof or incorporated by reference therein, and including any information contained in a Prospectus (as defined below) subsequently filed with the Commission pursuant to Rule 424(b) under the Securities Act or deemed to be a part of such registration statement pursuant to Rule 430B or 462(b) of the Securities Act, is herein called the “**Registration Statement**.” The base prospectus, including all documents incorporated therein by reference (to the extent such information has not been superseded or modified in accordance with Rule 412 under the Securities Act (as qualified by Rule 430B(g) of the Securities Act), each of which is included in the Registration Statement, as it or they may be supplemented by any additional prospectus supplement, in the form in which such prospectus and/or ATM Prospectus have most recently been filed by the Company with the Commission pursuant to Rule 424(b) under the Securities Act, together with any “issuer free writing prospectus” (“**Issuer Free Writing Prospectus**”), as defined in Rule 433 of the Securities Act (“**Rule 433**”), relating to the Placement Shares that (i) is required to be filed with the Commission by the Company or (ii) is exempt from filing pursuant to Rule 433(d)(5)(i), in each case in the form filed or required to be filed with the Commission or, if not required to be filed, in the form retained in the Company’s records pursuant to Rule 433(g), is herein called the “**Prospectus**.” Any reference herein to the Registration Statement, the Prospectus or any amendment or supplement thereto shall be deemed to refer to and include the documents incorporated by reference therein, and any reference herein to the terms “amend,” “amendment” or “supplement” with respect to the Registration Statement or the Prospectus shall be deemed to refer to and include the filing after the execution hereof of any document with the Commission deemed to be incorporated by reference therein. For purposes of this Agreement, all references to the Registration Statement, the Prospectus or to any amendment or supplement thereto shall be deemed to include any copy filed with the Commission pursuant to either the Electronic Data Gathering Analysis and Retrieval System, or if applicable, the Interactive Data Electronic Applications (collectively “**EDGAR**”).

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2. **Placements.** Each time that the Company wishes to issue and sell the Common Stock through the Sales Agent, as agent, hereunder (each, a “**Placement**”), it will notify the Sales Agent by email notice (or other method mutually agreed to in writing by the parties) (a “**Placement Notice**”) containing the parameters in accordance with which it desires the Common Stock to be sold, which shall at a minimum include the number of shares of Common Stock to be issued (the “**Placement Shares**”), the time period during which sales are requested to be made, any limitation on the number of shares of Common Stock that may be sold in any one Trading Day (as defined in **Section 3**) and any minimum price below which sales may not be made, a form of which containing such minimum sales parameters necessary is attached hereto as **Schedule 1**. The Placement Notice shall originate from any of the individuals from the Company set forth on **Schedule 2** (with a copy to each of the other individuals from the Company listed on such schedule), and shall be addressed to each of the individuals from the Sales Agent set forth on **Schedule 2**, as such **Schedule 2** may be amended from time to time. The Placement Notice shall be effective upon receipt by the Sales Agent unless and until (i) in accordance with the notice requirements set forth in **Section 4**, the Sales Agent declines to accept the terms contained therein for any reason, in its sole discretion, (ii) the entire amount of the Placement Shares have been sold, (iii) in accordance with the notice requirements set forth in **Section 4**, the Company suspends or terminates the Placement Notice, (iv) the Company issues a subsequent Placement Notice with parameters superseding those on the earlier dated Placement Notice, or (v) the Agreement has been terminated under the provisions of **Section 11**. The amount of any discount, commission or other compensation to be paid by the Company to the Sales Agent in connection with the sale of the Placement Shares through the Sales Agent, as agent, shall be as set forth in **Schedule 3**. It is expressly acknowledged and agreed that neither the Company nor the Sales Agent will have any obligation whatsoever with respect to a Placement or any Placement Shares unless and until the Company delivers a Placement Notice to the Sales Agent and the Sales Agent does not decline such Placement Notice pursuant to the terms set forth above, and then only upon the terms specified therein and herein. In the event of a conflict between the terms of this Agreement and the terms of a Placement Notice, the terms of the Placement Notice will control.

3. Sale of Placement Shares by the Sales Agent

(a) Subject to the terms and conditions herein set forth, upon the Company’s issuance of a Placement Notice, and unless the sale of the Placement Shares described therein has been declined, suspended, or otherwise terminated in accordance with the terms of this Agreement, the Sales Agent, as agent for the Company, will use its commercially reasonable efforts consistent with its normal trading and sales practices and applicable state and federal laws, rules and regulations and the rules of the NASDAQ Capital Market (the “**Exchange**”), for the period specified in the Placement Notice, to sell such Placement Shares up to the amount specified by the Company in, and otherwise in accordance with the terms of such Placement Notice. If acting as agent hereunder, the Sales Agent will provide written confirmation to the Company (including by email correspondence to each of the individuals of the Company set forth on **Schedule 2**, if receipt of such correspondence is actually acknowledged by any of the individuals to whom the notice is sent, other than via auto-reply) no later than the opening of the Trading Day (as defined below) immediately following the Trading Day on which it has made sales of Placement Shares hereunder setting forth the number of Placement Shares sold on such day, the volume-weighted average price of the Placement Shares, the compensation payable by the Company to the Sales Agent pursuant to **Section 2** with respect to such sales, and the Net Proceeds (as defined below) payable to the Company, with an itemization of the deductions made by the Sales Agent (as set forth in **Section 5(a)**) from the gross proceeds that it receives from such sales. Subject to the terms of the Placement Notice, the Sales Agent may sell Placement Shares by any method permitted by law deemed to be an “at the market” offering as defined in Rule 415 under the

Securities Act, including, without limitation, sales made directly on the Exchange, on any other existing trading market for the Common Stock or to or through a market maker. Subject to the terms of a Placement Notice, the Sales Agent may also sell Placement Shares by any other method permitted by law, including, but not limited to, in negotiated transactions with the Company's prior written consent. The Company acknowledges and agrees that (i) there can be no assurance that the Sales Agent will be successful in selling Placement Shares, (ii) the Sales Agent will incur no liability or obligation to the Company or any other person or entity if it does not sell Placement Shares for any reason other than a failure by the Sales Agent to use its commercially reasonable efforts consistent with its normal trading and sales practices and applicable law and regulations to sell such Placement Shares as required under this Agreement and (iii) the Sales Agent shall be under no obligation to purchase Placement Shares on a principal basis pursuant to this Agreement, except as otherwise agreed by the Sales Agent and the Company in writing and expressly set forth in a Placement Notice. For the purposes hereof, "**Trading Day**" means any day on which the Company's Common Stock is purchased and sold on the principal market on which the Common Stock is listed or quoted.

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(b) Under no circumstances shall the Company cause or request the offer or sale of any Placement Shares if, after giving effect to the sale of such Placement Shares, the aggregate number or gross sales proceeds of Placement Shares sold pursuant to this Agreement would exceed the lesser of: (i) the number or dollar amount of shares of Common Stock registered pursuant to the Registration Statement pursuant to which the offering hereunder is being made, (ii) the number of authorized but unissued and unreserved shares of Common Stock, (iii) the number or dollar amount of shares of Common Stock permitted to be offered and sold by the Company under Form S-3 (including General Instruction I.B.6. of Form S-3, if and for so long as applicable), (iv) the number or dollar amount of shares of Common Stock authorized from time to time to be issued and sold under this Agreement by the Company's board of directors, a duly authorized committee thereof or a duly authorized executive committee, and notified to the Sales Agent in writing, or (v) the number or dollar amount of shares of Common Stock for which the Company has filed the ATM Prospectus or other prospectus supplement specifically relating to the offering of the Placement Shares pursuant to this Agreement. Under no circumstances shall the Company cause or request the offer or sale of any Placement Shares pursuant to this Agreement at a price lower than the minimum price authorized from time to time by the Company's board of directors, a duly authorized committee thereof or a duly authorized executive committee, and notified to the Sales Agent in writing. Notwithstanding anything to the contrary contained herein, the parties hereto acknowledge and agree that compliance with the limitations set forth in this **Section 3(b)** on the number or dollar amount of Placement Shares that may be issued and sold under this Agreement from time to time shall be the sole responsibility of the Company, and that the Sales Agent shall have no obligation in connection with such compliance.

(c) During the term of this Agreement, neither the Sales Agent nor any of its affiliates or subsidiaries shall engage in (i) any short sale of any security of the Company or (ii) any sale of any security of the Company that the Sales Agent does not own or any sale which is consummated by the delivery of a security of the Company borrowed by, or for the account of, the Sales Agent. During the term of this Agreement and notwithstanding anything to the contrary herein, the Sales Agent agrees that in no event will the Sales Agent or its affiliates engage in any market making, bidding, stabilization or other trading activity with regard to the Common Stock or related derivative securities if such activity would be prohibited under Regulation M or other anti-manipulation rules under the Exchange Act.

4. Suspension of Sales.

(a) The Company or the Sales Agent may, upon notice to the other party in writing (including by email correspondence to each of the individuals of the other party set forth on **Schedule 2**, if receipt of such correspondence is actually acknowledged by any of the individuals to whom the notice is sent, other than via auto-reply) or by telephone (confirmed immediately by verifiable facsimile transmission or email correspondence to each of the individuals of the other party set forth on **Schedule 2**), suspend any sale of Placement Shares for a period of time (a "**Suspension Period**"); *provided, however*, that such suspension shall not affect or impair either party's obligations with respect to any Placement Shares sold hereunder prior to the receipt of such notice. Each of the parties agrees that no such notice under this **Section 4** shall be effective against the other unless it is made to one of the individuals named on **Schedule 2** hereto, as such schedule may be amended from time to time. During a Suspension Period, the Company shall not issue any Placement Notices and the Sales Agent shall not sell any Placement Shares hereunder. The party that issued a suspension notice shall notify the other party in writing of the Trading Day on which the Suspension Period shall expire not later than twenty-four (24) hours prior to such Trading Day.

(b) Notwithstanding any other provision of this Agreement, during any period in which the Company is in possession of material non-public information, the Company and the Sales Agent agree that (i) no sale of Placement Shares will take place, (ii) the Company shall not request the sale of any Placement Shares, and (iii) the Sales Agent shall not be obligated to sell or offer to sell any Placement Shares.

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5. Settlement.

(a) **Settlement of Placement Shares.** Unless otherwise specified in the applicable Placement Notice, settlement for sales of Placement Shares will occur on the second (2nd) Trading Day (or such earlier day as is industry practice for regular-way trading) following the respective Point of Sale (as defined below) (each, a "**Settlement Date**"). The amount of proceeds to be delivered to the Company on a Settlement Date against receipt of the Placement Shares sold (the "**Net Proceeds**") will be equal to the aggregate sales price received by the Sales Agent at which such Placement Shares were sold, after deduction for (i) the Sales Agent's discount, commission or other compensation for such sales payable by the Company pursuant to **Section 2** hereof, and (ii) any transaction fees, trading expenses or execution fees imposed by any clearing organization or any governmental or self-regulatory organization and any other fees incurred by the Sales Agent in respect of such sales.

(b) **Delivery of Placement Shares.** On or before each Settlement Date, the Company will, or will cause its transfer agent to, electronically transfer the Placement Shares being sold by crediting the Sales Agent's or its designee's account (provided the Sales Agent shall have given the Company written notice of such designee prior to the Settlement Date) at The Depository Trust Company through its Deposit and Withdrawal at Custodian System or by such other means of delivery as may be mutually agreed upon by the parties hereto which in all cases shall be freely tradable, transferable, registered shares in good deliverable form. On each Settlement Date, the Sales Agent will deliver the related Net Proceeds in same day funds to an account designated by the Company on, or prior to, the Settlement Date. The Company agrees that if the Company, or its transfer agent (if applicable), defaults in its obligation to deliver duly authorized Placement Shares on a Settlement Date, through no fault of the Sales Agent, the Company agrees that in addition to and in no way limiting the rights and obligations set forth in **Section 9(a)** (Company Indemnification) hereto, the Company will (i) hold the Sales Agent, its directors, officers, members, partners, employees and agents of the Sales Agent, each broker dealer affiliate of the Sales Agent, and each person, if any, who (A) controls the Sales Agent within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act or (B) is controlled by or is under common control with the Sales Agent (each, a "**Sales Agent Affiliate**"), and the Sales Agent's clearing organization, harmless against any loss, claim, damage, or reasonable and documented expense (including reasonable legal fees and expenses), as incurred, arising out of or in connection with such default by the Company or its transfer agent (if applicable) and (ii) pay to the Sales Agent any commission, discount, or other compensation to which it would otherwise have been entitled absent such default.

6. **Representations and Warranties of the Company.** The Company represents and warrants to, and agrees with, the Sales Agent that as of each Applicable Time (as defined in **Section 22(a)**), unless such representation, warranty or agreement specifies a different time or times:

(a) **Compliance with Registration Requirements.** As of each Applicable Time other than the date of this Agreement, the Registration Statement and any Rule 462(b) Registration Statement have been declared effective by the Commission under the Securities Act. The Company has complied to the Commission's satisfaction with all requests of the Commission for additional or supplemental information related to the Registration Statement and the Prospectus. No stop order suspending the effectiveness of the Registration Statement or any Rule 462(b) Registration Statement is in effect and no proceedings for such purpose have been instituted or are pending or, to the knowledge of the Company, are contemplated or threatened by the Commission. The Registration Statement and, assuming no act or omission on the part of the Sales Agent that would make such statements untrue, the offer and sale of the Placement Shares as contemplated hereby meet the requirements of Rule 415 under the Securities Act and comply in all

material respects with said Rule. In the section entitled “Plan of Distribution” in the ATM Prospectus, the Company has named WestPark Capital, Inc. as an agent that the Company has engaged in connection with the transactions contemplated by this Agreement. The Company was not and is not an “ineligible issuer” as defined in Rule 405 under the Securities Act.

(b) No Misstatement or Omission. The Registration Statement and any post-effective amendment thereto, at the time it became or becomes effective, complied or will comply in all material respects with the Securities Act. The Prospectus, and any amendment or supplement thereto, on the date of such Prospectus or amendment or supplement, complied or will comply in all material respects with the Securities Act. The Registration Statement and any post-effective amendment thereto, at the time it became or becomes effective, did not and will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. The Prospectus, as amended or supplemented, as of its date, did not and, as of each Point of Sale and each Settlement Date, will not contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The representations and warranties set forth in the two immediately preceding sentences do not apply to statements in or omissions from the Registration Statement or any post-effective amendment thereto, or the Prospectus, or any amendments or supplements thereto, made in reliance upon and in conformity with information relating to the Sales Agent furnished to the Company in writing by the Sales Agent expressly for use therein. “Point of Sale” means, for a Placement, the time at which an acquiror of Placement Shares entered into a contract, binding upon such acquiror, to acquire such Placement Shares.

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(c) Offering Materials Furnished to the Sales Agent. Copies of the Registration Statement, the Prospectus, and all amendments or supplements thereto and all documents incorporated by reference therein that were filed with the Commission on or prior to the date of this Agreement, have been delivered, or are publicly available through EDGAR, to the Sales Agent. Each Prospectus delivered to the Sales Agent for use in connection with the sale of the Placement Shares pursuant to this Agreement will be identical to the version of such Prospectus filed with the Commission via EDGAR, except to the extent permitted by Regulation S-T.

(d) Distribution of Offering Material By the Company. The Company has not distributed and will not distribute, prior to the completion of the Sales Agent’s distribution of the Placement Shares, any offering material in connection with the offering and sale of the Placement Shares other than the Prospectus or the Registration Statement.

(e) The Sales Agreement. This Agreement has been duly authorized, executed and delivered by the Company, and constitutes a valid, legal, and binding obligation of the Company, enforceable against the Company in accordance with its terms, except as rights to indemnity hereunder may be limited by federal or state securities laws and except as such enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws affecting the rights of creditors generally, and subject to general principles of equity. The Company has full corporate power and authority to enter into this Agreement and to authorize, issue and sell the Placement Shares as contemplated by this Agreement. This Agreement conforms in all material respects to the descriptions thereof in the Registration Statement and the Prospectus.

(f) Authorization of the Placement Shares. The Placement Shares, when issued and paid for as contemplated herein, will be validly issued, fully paid and nonassessable, will be issued in compliance with all applicable securities laws, and will be free of preemptive, registration or similar rights, and will conform to the description of the Common Stock contained in the Registration Statement and the Prospectus.

(g) No Applicable Registration or Other Similar Rights. There are no persons with registration or other similar rights to have any equity or debt securities registered for sale under the Registration Statement or included in the offering contemplated by this Agreement, except for such rights as have been duly waived. No person has the right to act as an underwriter or as a financial advisor to the Company in connection with the offer and sale of the Placement Shares hereunder, whether as a result of the filing or effectiveness of the Registration Statement or the sale of the Placement Shares as contemplated hereby or otherwise.

(h) No Material Adverse Change. Except as otherwise disclosed in the Prospectus, subsequent to the respective dates as of which information is given in the Prospectus: (i) there has been no material adverse change in the business, properties, prospects, operations, condition (financial or otherwise) or results of operations of the Company (any such change is called a “Material Adverse Change”), which, individually or in the aggregate, has had or would reasonably be expected to result in a Material Adverse Change; (ii) the Company has not incurred any material liability or obligation, indirect, direct or contingent, not in the ordinary course of business nor entered into any material transaction or agreement not in the ordinary course of business; (iii) there has been no dividend or distribution of any kind declared, paid or made by the Company; (iv) no officer or director of the Company has resigned from any position with the Company; and (v) there has not been any Material Adverse Change in the Company’s long-term debt.

(i) Independent Accountants. To the knowledge of the Company, Weinberg & Company, PA, whose report is filed with the Commission and included or incorporated by reference in the Registration Statement and the Prospectus, is an independent registered public accounting firm as required by the Securities Act and the Public Company Accounting Oversight Board.

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(j) Financial Statements; Preparation of the Financial Statements. The financial statements filed with the Commission as a part of the Registration Statement and included in the Prospectus, together with the related notes and schedules, present fairly, in all material respects, the consolidated financial position of the Company and its subsidiaries as of and at the dates indicated and the results of their operations and cash flows for the periods specified. Such financial statements and supporting schedules have been prepared in conformity with U.S. generally accepted accounting principles (“GAAP”) applied on a consistent basis throughout the periods involved, except as may be expressly stated in the related notes thereto. No other financial statements or supporting schedules are required to be included in or incorporated in the Registration Statement.

(k) 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 in the Registration Statement or the Prospectus has been made or reaffirmed by the Company without a reasonable basis or has been disclosed by the Company other than in good faith.

(l) Statistical and Marketing-Related Data. The statistical and market-related data included in each of the Registration Statement and the Prospectus are based on or derived from sources that the Company reasonably and in good faith believes are reliable and accurate or represent the Company’s good faith estimates that are made on the basis of data derived from such sources.

(m) XBRL. The interactive data in eXtensible Business Reporting Language included or incorporated by reference in the Registration Statement fairly presents the information called for in all material respects and has been prepared in accordance with the Commission’s rules and guidelines applicable thereto.

(n) Incorporation and Good Standing of the Company. The Company is a corporation duly incorporated and validly existing under the laws of the State of Maryland. The Company has requisite corporate power to carry on its business as described in the Prospectus. The Company is duly qualified to transact business and is in good standing in all jurisdictions in which the conduct of its business requires such qualification; except where the failure to be so qualified or to be in good standing would not result in a Material Adverse Change. The Company has no subsidiaries and does not own or control, directly or indirectly, any corporation, association or other entity other than the subsidiaries listed in Exhibit 21.1 to the Company’s Annual Report on Form 10-K for the most recently ended fiscal year and other than (i) those subsidiaries not required to be listed on Exhibit 21.1 by Item 601 of Regulation S-K under the Exchange Act and (ii) those subsidiaries formed since the last day of the most recently ended fiscal year.

(o) Capital Stock Matters. All issued and outstanding securities of the Company issued prior to the transactions contemplated by this Agreement have been duly authorized and validly issued and are fully paid and non-assessable; the holders thereof have no rights of rescission with respect thereto, and are not subject to personal liability

by reason of being such holders; and none of such securities were issued in violation of the preemptive rights of any holders of any security of the Company or similar contractual rights granted by the Company. The authorized shares of Common Stock conform in all material respects to all statements relating thereto contained in the Registration Statement and the Prospectus. The offers and sales of the outstanding shares of Common Stock were at all relevant times either registered under the Securities Act and the applicable state securities or "blue sky" laws or, based in part on the representations and warranties of the purchasers of such shares, exempt from such registration requirements. The description of the Company's stock option, stock bonus and other stock plans or arrangements, and the options or other rights granted thereunder, as described in the Registration Statement and the Prospectus, accurately and fairly present, in all material respects, the information required to be shown with respect to such plans, arrangements, options and rights.

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(p) Non-Contravention of Existing Instruments; No Further Authorizations or Approvals Required. The Company's execution, delivery and performance of this Agreement and consummation of the transactions contemplated hereby or by the Registration Statement and the Prospectus (including the issuance and sale of the Placement Shares and the use of the proceeds from the sale of the Placement Shares as described in the Prospectus under the caption "Use of Proceeds") will not (A) result in a material violation of any existing applicable law, rule, regulation, judgment, order, writ or decree of any arbitrator, court, governmental body, regulatory body, administrative agency or other authority, body or agency having jurisdiction over the Company or any of its Subsidiaries or any of their respective properties, assets or operations (each, a "Governmental Entity") as of the date hereof (including, without limitation, those promulgated by the Food and Drug Administration of the U.S. Department of Health and Human Services (the "FDA") or by any foreign, federal, state or local regulatory authority performing functions similar to those performed by the FDA), (B) conflict with, result in any violation or breach of, or constitute a default (or an event that with notice or lapse of time or both would become a default) under, or give to others any right of termination, amendment, acceleration or cancellation (with or without notice, lapse of time or both) (a "Default Acceleration Event") of, any agreement, lease, credit facility, debt, note, bond, mortgage, indenture or other instrument ("Contract") or obligation or other understanding to which the Company is a party or by which any property or asset of the Company is bound or affected, except to the extent that such conflict, default, or Default Acceleration Event is not reasonably likely to result in a Material Adverse Change, or (C) result in a breach or violation of any of the terms and provisions of, or constitute a default under, the Company's articles of incorporation (as the same may be amended or restated from time to time) or bylaws (as the same may be amended or restated from time to time). The Company is not in violation, breach or default under its articles of incorporation (as the same may be amended or restated from time to time) or bylaws (as the same may be amended or restated from time to time). Neither the Company nor, to its knowledge, any other party is in violation, breach or default of any Contract that has resulted in or could reasonably be expected to result in a Material Adverse Change. Each approval, consent, order, authorization, designation, declaration or filing by or with any regulatory, administrative or other governmental body necessary in connection with the execution and delivery by the Company of this Agreement and the performance of the Company of the transactions herein contemplated has been obtained or made and is in full force and effect, except (i) with respect to any Applicable Time at which the Sales Agent would not be able to rely on Rule 5110(b)(7)(C)(i) of the Financial Industry Regulatory Authority, Inc. ("FINRA"), such additional steps as may be required by FINRA, (ii) filings with the Commission required under the Securities Act or the Exchange Act, or filings with the Exchange pursuant to the rules and regulations of the Exchange, in each case that are contemplated by this Agreement to be made after the date of this Agreement, and (iii) such additional steps as may be necessary to qualify the Common Stock for sale by the Sales Agent under state securities or Blue Sky laws.

(q) No Material Actions or Proceedings. There is no action, suit, proceeding, inquiry, arbitration, investigation, litigation or governmental proceeding pending or, to the Company's knowledge, threatened against, or involving the Company or, to the Company's knowledge, any executive officer or director, including any proceeding before the FDA or comparable federal, state, local or foreign governmental bodies (it being understood that the interaction between the Company and the FDA and such comparable governmental bodies relating to the clinical development and product approval process shall not be deemed proceedings for purposes of this representation), which has not been disclosed in the Registration Statement and the Prospectus which is required to be disclosed, except as would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Change.

(r) Labor Disputes. No labor dispute with the employees of the Company exists or, to the knowledge of the Company, is imminent. The Company is not aware that any key employee or significant group of employees of the Company plans to terminate employment with the Company.

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

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(t) Tax Law Compliance. The Company has filed all returns (as hereinafter defined) required to be filed with taxing authorities prior to the date hereof or has duly obtained extensions of time for the filing thereof. The Company has paid all taxes (as hereinafter defined) shown as due on such returns that were filed and has paid all taxes imposed on or assessed against the Company. The provisions for taxes payable, if any, shown on the financial statements filed with or as part of or incorporated by reference in the Registration Statement are sufficient for all accrued and unpaid taxes, whether or not disputed, and for all periods to and including the dates of such consolidated financial statements. Other than as disclosed in the Registration Statement and the Prospectus, (i) no issues have been raised (and are currently pending) by any taxing authority in connection with any of the returns or taxes asserted as due from the Company, and (ii) no waivers of statutes of limitation with respect to the returns or collection of taxes have been given by or requested from the Company. There are no tax liens against the assets, properties or business of the Company. The term "taxes" means all federal, state, local, foreign and other net income, gross income, gross receipts, sales, use, ad valorem, transfer, franchise, profits, license, lease, service, service use, withholding, payroll, employment, excise, severance, stamp, occupation, premium, property, windfall profits, customs, duties or other taxes, fees, assessments or charges of any kind whatever, together with any interest and any penalties, additions to tax or additional amounts with respect thereto. The term "returns" means all returns, declarations, reports, statements and other documents required to be filed in respect to taxes.

(u) Company Not an "Investment Company". The Company is not, and will not be, either after receipt of payment for the Placement Shares or after the application of the proceeds therefrom as described under "Use of Proceeds" in the Registration Statement or the Prospectus, required to register as an "investment company" under the Investment Company Act of 1940, as amended (the "Investment Company Act").

(v) Insurance. The Company carries or is entitled to the benefits of insurance, with reputable insurers, in such amounts and covering such risks which the Company believes are adequate, and all such insurance is in full force and effect. The Company has no reason to believe that it will not be able (i) to renew its existing insurance coverage as and when such policies expire or (ii) to obtain comparable coverage from similar institutions as may be necessary or appropriate to conduct its business as now conducted

and at a cost that would not result in a Material Adverse Change.

(w) No Price Stabilization or Manipulation. The Company has not taken, directly or indirectly (without giving any effect to the activities of the Sales Agent), any action designed to or that might cause or result in stabilization or manipulation of the price of the Common Stock or of any “reference security” (as defined in Rule 100 of Regulation M under the Exchange Act (“Regulation M”)) with respect to the Common Stock, whether to facilitate the sale or resale of the Placement Shares or otherwise, and has taken no action which would directly or indirectly violate Regulation M.

(x) Related Party Transactions. There are no business relationships or related party transactions involving the Company or any other person required to be described in the Registration Statement and the Prospectus that have not been described as required pursuant to the Securities Act.

(y) Exchange Act Compliance. The documents incorporated or deemed to be incorporated by reference in the Registration Statement, the Prospectus or any amendment or supplement thereto, at the time they were or hereafter are filed with the Commission under the Exchange Act, complied and will comply in all material respects with the requirements of the Exchange Act, and, when read together with the other information in the Prospectus, at each Point of Sale and each Settlement Date, will not contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(z) Conformity of Issuer Free Writing Prospectus. Each Issuer Free Writing Prospectus conformed or will conform in all material respects to the requirements of the Securities Act on the date of first use, and the Company has complied or will comply with any filing requirements applicable to such Issuer Free Writing Prospectus pursuant to the Securities Act. Each Issuer Free Writing Prospectus, as of its issue date and at all subsequent times through the completion of the public offer and sale of the Placement Shares, did not, does not and will not include any information that conflicted, conflicts or will conflict with the information contained in the Registration Statement or the Prospectus, including any document incorporated by reference therein that has not been superseded or modified. The Company has not made any offer relating to the Placement Shares that would constitute an Issuer Free Writing Prospectus without the prior written consent of the Sales Agent. The Company has retained in accordance with the Securities Act all Issuer Free Writing Prospectuses that were not required to be filed pursuant to the Securities Act.

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(aa) Compliance with Environmental Laws. The Company is in compliance with all foreign, federal, state and local rules, laws and regulations relating to the use, treatment, storage and disposal of hazardous or toxic substances or waste and protection of health and safety or the environment which are applicable to its business (“Environmental Laws”), except where the failure to comply would not, singularly or in the aggregate, result in a Material Adverse Change. There has been no storage, generation, transportation, handling, treatment, disposal, discharge, emission, or other release of any kind of toxic or other wastes or other hazardous substances by, due to, or caused by the Company (or, to the Company’s knowledge, any other entity for whose acts or omissions the Company is or may otherwise be liable) upon any of the property now or previously owned or leased by the Company, or upon any other property, in violation of any law, statute, ordinance, rule, regulation, order, judgment, decree or permit or which would, under any law, statute, ordinance, rule (including rule of common law), regulation, order, judgment, decree or permit, give rise to any liability, except for any violation or liability which would not, singularly or in the aggregate with all such violations and liabilities, result in a Material Adverse Change; and there has been no disposal, discharge, emission or other release of any kind onto such property or into the environment surrounding such property of any toxic or other wastes or other hazardous substances with respect to which the Company has knowledge, except for any such disposal, discharge, emission, or other release of any kind which would not, singularly or in the aggregate with all such discharges and other releases, result in a Material Adverse Change. In the ordinary course of business, the Company conducts periodic reviews of the effect of Environmental Laws on its business and assets, in the course of which it identifies and evaluates associated costs and liabilities (including, without limitation, any capital or operating expenditures required for clean-up, closure of properties or compliance with Environmental Laws or governmental permits issued thereunder, any related constraints on operating activities and any potential liabilities to third parties). On the basis of such reviews, the Company has reasonably concluded that such associated costs and liabilities would not, singularly or in the aggregate, result in a Material Adverse Change.

(bb) Intellectual Property. The Company owns or possesses or has valid rights to use all patents, patent applications, trademarks, service marks, trade names, trademark registrations, service mark registrations, copyrights, licenses, inventions, trade secrets and similar rights (“Intellectual Property Rights”) necessary for the conduct of the business of the Company as currently carried on and as described in the Registration Statement and the Prospectus, except as would not be reasonably likely to result in a Material Adverse Change. To the knowledge of the Company, no action or use by the Company necessary for the conduct of its business as currently carried on and as described in the Registration Statement and the Prospectus will involve or give rise to any infringement of, or license or similar fees for, any Intellectual Property Rights of others, except where such action, use, license or fee is not reasonably likely to result in a Material Adverse Change. The Company has not received any notice alleging any such infringement, fee or conflict with asserted Intellectual Property Rights of others. Except as would not reasonably be expected to result, individually or in the aggregate, in a Material Adverse Change (A) to the knowledge of the Company, there is no infringement, misappropriation or violation by third parties of any of the Intellectual Property Rights owned by the Company; (B) there is no pending or, to the knowledge of the Company, threatened action, suit, proceeding or claim by others challenging the rights of the Company in or to any such Intellectual Property Rights, and the Company is unaware of any facts which would form a reasonable basis for any such claim, that would, individually or in the aggregate, together with any other claims in this Section 6(bb), reasonably be expected to result in a Material Adverse Change; (C) the Intellectual Property Rights owned by the Company and, to the knowledge of the Company, the Intellectual Property Rights licensed to the Company have not been adjudged by a court of competent jurisdiction invalid or unenforceable, in whole or in part, and there is no pending or, to the Company’s knowledge, threatened action, suit, proceeding or claim by others challenging the validity or scope of any such Intellectual Property Rights, and the Company is unaware of any facts which would form a reasonable basis for any such claim that would, individually or in the aggregate, together with any other claims in this Section 6(bb), reasonably be expected to result in a Material Adverse Change; (D) there is no pending or, to the Company’s knowledge, threatened action, suit, proceeding or claim by others that the Company infringes, misappropriates or otherwise violates any Intellectual Property Rights or other proprietary rights of others, the Company has not received any written notice of such claim and the Company is unaware of any other facts which would form a reasonable basis for any such claim that would, individually or in the aggregate, together with any other claims in this Section 6(bb), reasonably be expected to result in a Material Adverse Change; and (E) to the Company’s knowledge, no employee of the Company is in or has ever been in violation in any material respect of any term of any employment contract, patent disclosure agreement, invention assignment agreement, non-competition agreement, non-solicitation agreement, nondisclosure agreement or any restrictive covenant to or with a former employer where the basis of such violation relates to such employee’s employment with the Company, or actions undertaken by the employee while employed with the Company and could reasonably be expected to result, individually or in the aggregate, in a Material Adverse Change. To the Company’s knowledge, all material technical information developed by and belonging to the Company which has not been patented has been kept confidential. The Company is not a party to or bound by any options, licenses or agreements with respect to the Intellectual Property Rights of any other person or entity that are required to be set forth in the Registration Statement and the Prospectus and are not described therein. The Registration Statement and the Prospectus contain in all material respects the same description of the matters set forth in the preceding sentence. None of the technology employed by the Company has been obtained or is being used by the Company in violation of any contractual obligation binding on the Company or, to the Company’s knowledge, any of its officers, directors or employees, or otherwise in violation of the rights of any persons.

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(cc) Brokers. The Company is not a party to any contract, agreement or understanding with any person (other than as contemplated by this Agreement) that would give rise to a valid claim against the Company or the Sales Agent for a brokerage commission, finder’s fee or like payment in connection with the offering and sale of the Placement Shares by the Sales Agent under this Agreement.

(dd) No Outstanding Loans or Other Indebtedness. There are no outstanding loans, advances (except normal advances for business expenses in the ordinary course of business) or guarantees or indebtedness by the Company to or for the benefit of any of the officers or directors of the Company, or any of their respective family members, except as disclosed in the Registration Statement and the Prospectus.

(ee) No Reliance. The Company has not relied upon the Sales Agent or legal counsel for the Sales Agent for any legal, tax or accounting advice in connection with the offering and sale of the Placement Shares.

(ff) Broker-Dealer Status. Neither the Company nor any of its related entities (i) is required to register as a “broker” or “dealer” in accordance with the provisions of the Exchange Act or (ii) directly or indirectly through one or more intermediaries, controls or is a “person associated with a member” or “associated person of a member” (within the meaning of Article I of the NASD Manual administered by FINRA). To the Company’s knowledge, there are no affiliations or associations between any member of FINRA and any of the Company’s officers, directors or 5% or greater security holders, except as set forth in the Registration Statement.

(gg) Market Capitalization. At the time the Registration Statement and any Rule 462(b) Registration Statement was or will be filed with the Commission, at the time the Registration Statement and any Rule 462(b) Registration Statement was or will be declared effective by the Commission, and at the time the Company’s most recent Annual Report on Form 10-K was filed with the Commission, the Company met or will meet the then applicable requirements for the use of Form S-3 under the Securities Act, including, but not limited to, General Instruction I.B.1 of Form S-3. The Company is not a shell company (as defined in Rule 405) 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 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.

(hh) FINRA Matters. All of the information provided to the Sales Agent or to counsel for the Sales Agent by the Company, its counsel, its officers and directors and, to the Company’s knowledge, the holders of any securities (debt or equity) or options to acquire any securities of the Company in connection with the offering of the Placement Shares is true, complete, correct and compliant with FINRA’s rules in all material respects and any letters, filings or other supplemental information provided to FINRA pursuant to FINRA Rules or NASD Conduct Rules is true, complete and correct in all material respects. Except as disclosed in the Registration Statement and the Prospectus, there is no (i) officer or director of the Company, (ii) beneficial owner of 5% or more of any class of the Company’s securities or (iii) beneficial owner of the Company’s unregistered equity securities that were acquired during the 180-day period immediately preceding the date of this Agreement that is an affiliate or associated person of a FINRA member participating in the offer, issuance and sale of the Placement Shares as contemplated by this Agreement and the Registration Statement and the Prospectus (as determined in accordance with the rules and regulations of FINRA).

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(ii) Compliance with Orders. The Company is not in violation of any material judgment, decree, or order of any court, arbitrator or other governmental authority.

(jj) Sarbanes-Oxley Act. The Company is in material compliance with any and all applicable requirements of the Sarbanes-Oxley Act of 2002 and the rules and regulations promulgated in connection therewith (the “Sarbanes-Oxley Act”) that are effective as of the date hereof, and any and all applicable rules and regulations promulgated by the Commission thereunder that are effective as of the date hereof and as of the date hereof.

(kk) Disclosure Controls And Procedures. Except as set forth in the Registration Statement and the Prospectus, the Company maintains systems of “internal control over financial reporting” (as defined under Rules 13a-15 and 15d-15 under the Exchange Act) that comply with the requirements of the Exchange Act and have been designed by, or under the supervision of, their respective principal executive and principal financial officers, or persons performing similar functions, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP, including, but not limited to, internal accounting controls sufficient to provide reasonable assurance that (i) transactions are executed in accordance with management’s general or specific authorizations; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain asset accountability; (iii) access to assets is permitted only in accordance with management’s general or specific authorization; (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences; and (v) the interactive data in eXtensible Business Reporting Language included or incorporated by references in the Registration Statement and the Prospectus fairly present the information called for in all material respects and are prepared in accordance with the Commission’s rules and guidelines applicable thereto. Since the date of the latest audited financial statements included in the Registration Statement and the Prospectus, there has been no change in the Company’s internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company’s internal control over financial reporting.

(ll) ERISA. The Company and any “employee benefit plan” (as defined under the Employee Retirement Income Security Act of 1974, as amended, and the regulations and published interpretations thereunder (collectively, “ERISA”)) established or maintained by the Company or its “ERISA Affiliates” (as defined below) are in compliance in all material respects with ERISA. “ERISA Affiliate” means, with respect to the Company, any member of any group of organizations described in Sections 414(b),(c),(m) or (o) of the Internal Revenue Code of 1986, as amended, and the regulations and published interpretations thereunder (the “Code”) of which the Company is a member. No “reportable event” (as defined under ERISA) has occurred or is reasonably expected to occur with respect to any “employee benefit plan” established or maintained by the Company or any of its ERISA Affiliates. No “employee benefit plan” established or maintained by the Company or any of its ERISA Affiliates, if such “employee benefit plan” were terminated, would have any “amount of unfunded benefit liabilities” (as defined under ERISA). Neither the Company nor any of its ERISA Affiliates has incurred or reasonably expects to incur any material liability under (i) Title IV of ERISA with respect to termination of, or withdrawal from, any “employee benefit plan” or (ii) Sections 412, 4971, 4975 or 4980B of the Code. Each “employee benefit plan” established or maintained by the Company or any of its ERISA Affiliates that is intended to be qualified under Section 401(a) of the Code is so qualified and, to the knowledge of the Company, nothing has occurred, whether by action or failure to act, which would cause the loss of such qualification.

(mm) Contracts and Agreements. The agreements and documents described in the Registration Statement and the Prospectus conform in all material respects to the descriptions thereof contained therein and there are no agreements or other documents required by the Securities Act to be described in the Registration Statement and the Prospectus or to be filed with the Commission as exhibits to the Registration Statement, that have not been so described or filed. Each agreement or other instrument (however characterized or described) to which the Company is a party or by which it is or may be bound or affected and (i) that is referred to in the Registration Statement and the Prospectus, or (ii) is material to the Company’s business, has been duly authorized and validly executed by the Company, is in full force and effect in all material respects and is enforceable against the Company and, to the Company’s knowledge, the other parties thereto, in accordance with its terms, except (x) as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting creditors’ rights generally, (y) as enforceability of any indemnification or contribution provision may be limited under the federal and state securities laws, and (z) that the remedy of specific performance and injunctive and other forms of equitable relief may be subject to the equitable defenses and to the discretion of the court before which any proceeding therefor may be brought. None of such agreements or instruments has been assigned by the Company, and neither the Company nor, to the Company’s knowledge, any other party is in default thereunder and, to the Company’s knowledge, no event has occurred that, with the lapse of time or the giving of notice, or both, would constitute a default thereunder. To the best of the Company’s knowledge, performance by the Company of the material provisions of such agreements or instruments will not result in a violation of any existing applicable law, rule, regulation, judgment, order or decree of any governmental agency or court, domestic or foreign, having jurisdiction over the Company or any of its assets or businesses (each, a “Governmental Entity”), including, without limitation, those relating to environmental laws and regulations.

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(nn) Title to Properties. Except as set forth in the Registration Statement and the Prospectus, the Company has good and marketable title in fee simple to, or has valid rights to lease or otherwise use, all items of real or personal property which are material to the business of the Company, in each case free and clear of all liens, encumbrances, security interests, claims and defects that do not, singly or in the aggregate, materially affect the value of such property and do not interfere with the use made and proposed to be made of such property by the Company; and all of the leases and subleases material to the business of the Company, and under which the Company holds properties described

in the Registration Statement and the Prospectus, are in full force and effect, and the Company has not received any notice of any material claim of any sort that has been asserted by anyone adverse to the rights of the Company under any of the leases or subleases mentioned above, or affecting or questioning the rights of the Company to the continued possession of the leased or subleased premises under any such lease or sublease, which would result in a Material Adverse Change.

(oo) No Unlawful Contributions or Other Payments. No payments or inducements have been made or given, directly or indirectly, to any federal or local official or candidate for, any federal or state office in the United States or foreign offices by the Company or any of its officers or directors, or, to the knowledge of the Company, by any of its employees or agents or any other person in connection with any opportunity, contract, permit, certificate, consent, order, approval, waiver or other authorization relating to the business of the Company, except for such payments or inducements as were lawful under applicable laws, rules and regulations. Neither the Company, nor, to the knowledge of the Company, any director, officer, agent, employee or other person associated with or acting on behalf of the Company, (i) has used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expense relating to political activity; (ii) made any direct or indirect unlawful payment to any government official or employee from corporate funds; or (iii) made any bribe, unlawful rebate, payoff, influence payment, kickback or other unlawful payment in connection with the business of the Company.

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

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

(rr) OFAC. None of the Company or, to the knowledge of the Company, any director, officer, agent, employee, affiliate or person acting on behalf of the Company is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department (“**OFAC**”); and the Company will not directly or indirectly use the proceeds of the offering, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity, for the purpose of financing the activities of any person currently subject to any U.S. sanctions administered by OFAC.

(ss) Exchange Listing. The Common Stock is registered pursuant to Section 12(b) of the Exchange Act and is currently listed on the Exchange under the trading symbol “LIXT.” Except as disclosed in the Registration Statement and the Prospectus, there is no action pending by the Company or, to the Company’s knowledge, the Exchange to delist the Common Stock from the Exchange, nor has the Company received any notification that the Exchange is contemplating terminating such listing. The Company has no intention to delist the Common Stock from the Exchange or to deregister the Common Stock under the Exchange Act, in either case, at any time during the period commencing on the date of this Agreement through and including the 90th calendar day after the termination of this Agreement. The Placement Shares have been approved for listing on the Exchange. The issuance and sale of the Placement Shares under this Agreement does not contravene the rules and regulations of the Exchange.

(tt) Margin Rules. The Company owns no “margin securities” as that term is defined in Regulation U of the Board of Governors of the Federal Reserve System (the “**Federal Reserve Board**”), and none of the proceeds from the issuance, sale and delivery of the Placement Shares as contemplated by this Agreement and as described in the Registration Statement and the Prospectus will be used, directly or indirectly, for the purpose of purchasing or carrying any margin security, for the purpose of reducing or retiring any indebtedness which was originally incurred to purchase or carry any margin security or for any other purpose which might cause any of the shares of Common Stock to be considered a “purpose credit” within the meanings of Regulation T, U or X of the Federal Reserve Board.

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(uu) Underwriter Agreements. The Company is not a party to any agreement with an agent or underwriter for any other “at-the-market” or continuous equity transaction.

(vv) Board of Directors. The qualifications of the persons serving as board members of the Company and the overall composition of the Company’s Board of Directors comply with the applicable requirements of the Exchange Act and the Sarbanes-Oxley Act and the listing rules of the Exchange applicable to the Company. At least one member of the Audit Committee of the Board of Directors of the Company qualifies as an “audit committee financial expert,” as such term is defined under Regulation S-K and the listing rules of the Exchange. In addition, at least a majority of the persons serving on the Board of Directors of the Company qualify as “independent,” as defined under the listing rules of the Exchange.

(ww) No Integration. 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 the offer and sale of the Placement Shares hereunder to be integrated with prior offerings by the Company for purposes of the Securities Act that would require the registration of any such securities under the Securities Act.

(xx) No Material Defaults. The Company has not defaulted on any installment on indebtedness for borrowed money or on any rental on one or more long-term leases, which defaults, individually or in the aggregate, could reasonably be expected to result in a Material Adverse Change. The Company has not filed a report pursuant to Section 13(a) or 15(d) of the Exchange Act since the filing of its last Annual Report on Form 10-K, indicating that it (i) has failed to pay any dividend or sinking fund installment on preferred stock or (ii) has defaulted on any installment on indebtedness for borrowed money or on any rental on one or more long-term leases, which defaults, individually or in the aggregate, could reasonably be expected to result in a Material Adverse Change.

(yy) Books and Records. The minute books of the Company have been made available to the Sales Agent and counsel for the Sales Agent, and such books (i) contain a substantially complete summary of all meetings and material actions of the board of directors (including each board committee) and stockholders of the Company (or analogous governing bodies and interest holders, as applicable) since the time of its respective incorporation or organization through the date of the latest meeting and action, and (ii) accurately in all material respects reflect all transactions referred to in such minutes.

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(zz) Regulations. The disclosures in the Registration Statement and the Prospectus concerning the effects of federal, state, local and all foreign regulation on the Company’s business in the past and as currently contemplated are correct in all material respects and no other such regulations are required to be disclosed in the Registration Statement and the Prospectus which are not so disclosed.

(aaa) Regulatory Compliance. Except as described in the Registration Statement and the Prospectus, the Company and its Subsidiaries: (i) within the last five (5) years have not received any Form 483, notice of adverse finding, warning letter, untitled letter or other correspondence or written notice from any U.S., state, local or foreign

government or drug regulatory agency (collectively, the “**Regulatory Agencies**”) or any other Governmental Entity alleging or asserting noncompliance with any Healthcare Laws (as defined below) or the terms of any Authorizations, except in each case as would not, individually or in the aggregate, have a Material Adverse Change; (ii) have not received written notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any Governmental Entity or third party alleging that any product operation or activity is in violation of any Healthcare Laws or Authorizations and have no knowledge that any such Governmental Entity or third party is considering any such claim, litigation, arbitration, action, suit, investigation or proceeding, except in each case as would not, individually or in the aggregate, have a Material Adverse Change; (iii) (A) have filed, obtained, maintained or submitted all reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Healthcare Laws or Authorizations, (B) except as would not, individually or in the aggregate, have a Material Adverse Change, all such reports, documents, forms, notices, applications, records, claims, submissions and supplements were complete and correct and not misleading on the date filed (or were corrected or supplemented by a subsequent submission), and (C) neither the Company nor its Subsidiaries are aware of any reasonable basis for any material liability with respect to such filings; and (iv) have not, and to the knowledge of the Company, the Company’s officers, employees and agents have not, made any untrue statement of a material fact or fraudulent statement to any Governmental Entity or failed to disclose a material fact required to be disclosed to any Governmental Entity.

(bbb) Preclinical Studies and Clinical Trials. To the Company’s knowledge, the descriptions of and information regarding the preclinical studies and clinical trials, and the data and results derived therefrom, contained in the Registration Statement and the Prospectus are accurate and complete in all material respects and the Company and its Subsidiaries, after due inquiry, are not aware of any nonclinical studies, clinical trials, or other information that would reasonably call into question the validity, completeness, or accuracy of any study, trial, results or data described in the Registration Statement and the Prospectus when viewed in the context in which such studies, trials, results, or data are described therein. The studies and trials conducted by or on behalf of or sponsored by the Company and its Subsidiaries were and, if still pending, are being conducted in all material respect in accordance with standard medical and scientific research procedures and all applicable laws, including, but not limited to, the Federal Food, Drug and Cosmetic Act (the “**FDCA**”) and its applicable implementing regulations at 21 C.F.R. Parts 50, 54, 56, 58 and 312. Except to the extent disclosed in the Registration Statement and the Prospectus, no investigational new drug application submitted by or on behalf of the Company or its Subsidiaries with the FDA has been terminated or suspended by the FDA, and neither the FDA nor any applicable foreign regulatory agency has commenced, or, to the knowledge of the Company, threatened to initiate, any action to place a clinical hold order on, or otherwise terminate, delay or suspend, any proposed or ongoing clinical investigation conducted or proposed to be conducted by or on behalf of the Company or its Subsidiaries.

(ccc) Compliance with Healthcare Laws. The Company and its Subsidiaries have been in compliance in all material respects with all applicable healthcare laws, rules and regulations, to the extent they apply to the Company and its current activities, including, without limitation, (i) the FDCA (21 U.S.C. §§ 301 et seq.); (ii) all applicable foreign, federal, state and local healthcare related fraud and abuse laws, including, without limitation, the federal Anti-kickback Statute (42 U.S.C. § 1320a-7b(b)), the civil False Claims Act (31 U.S.C. §§ 3729 et seq.), the criminal False Claims Law (42 U.S.C. § 1320a-7b(a)), the civil monetary penalties law (42 U.S.C. § 1320a-7a), the exclusion laws (42 U.S.C. § 1320a-7), the Physician Payments Sunshine Act (42 U.S.C. § 1320a-7h), all criminal laws relating to healthcare fraud and abuse, including but not limited to 18 U.S.C. Sections 286, 287, 1035, 1347 and 1349, the healthcare fraud criminal provisions under the U.S. Health Insurance Portability and Accountability Act of 1996 (“**HIPAA**”) (42 U.S.C. §§1320d et seq.), the Medicare statute (Title XVIII of the Social Security Act), and the Medicaid statute (Title XIX of the Social Security Act); (iii) the patient privacy, data security and beach notification provisions under HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 (42 U.S.C. §§17921 et seq.); (iv) comparable state and local laws; and (v) the regulations promulgated pursuant to such laws (collectively, the “**Healthcare Laws**”). Neither the Company nor any of its Subsidiaries has received written notice or other correspondence of any claim, action, suit, audit, survey, proceeding, hearing, enforcement, investigation, arbitration or other action (“**Action**”) from any court, arbitrator or Governmental Entity or third party alleging that any product, operation or activity is in violation of any Healthcare Laws, and, to the Company’s knowledge, no such Action is threatened. Neither the Company nor any of its Subsidiaries is a party to or has any ongoing reporting obligations pursuant to any corporate integrity agreement, deferred prosecution agreement, monitoring agreement, consent decree, settlement order, plan of correction or similar agreement with or imposed by any Governmental Entity. Additionally, neither the Company nor any of its Subsidiaries, nor any of their employees, officers or directors, or to the Company’s knowledge, agents, is or has been excluded, suspended or debarred from participation in any U.S. state or federal healthcare program or human clinical research or, to the knowledge of the Company, is subject to a governmental inquiry, investigation, proceeding, or other similar action that could reasonably be expected to result in debarment, suspension, or exclusion.

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(ddd) Confidentiality and Non-Competitions. To the Company’s knowledge, no director, officer, key employee or consultant of the Company is subject to any confidentiality, non-disclosure, non-competition agreement or non-solicitation agreement with any employer or prior employer that could reasonably be expected to materially affect his ability to be and act in his respective capacity of the Company or be expected to result in a Material Adverse Change. Any certificate signed by an officer of the Company and delivered to the Sales Agent or to counsel for the Sales Agent pursuant to or in connection with this Agreement shall be deemed to be a representation and warranty by the Company to the Sales Agent as to the matters set forth therein.

The Company acknowledges that the Sales Agent and, for purposes of the opinions to be delivered pursuant to Section 7 hereof, counsel to the Company and counsel to the Sales Agent, will rely upon the accuracy and truthfulness of the foregoing representations and hereby consents to such reliance.

7. Covenants of the Company. The Company covenants and agrees with the Sales Agent that:

(a) Registration Statement Amendments. After the date of this Agreement and during any period in which a Prospectus relating to any Placement Shares is required to be delivered by the Sales Agent under the Securities Act (including in circumstances where such requirement may be satisfied pursuant to Rule 153 or Rule 172 under the Securities Act), (i) the Company will notify the Sales Agent promptly of the time when any subsequent amendment to the Registration Statement, other than documents incorporated by reference, has been filed with the Commission and/or has become effective or any subsequent supplement to the Prospectus has been filed and of any request by the Commission for any amendment or supplement to the Registration Statement or Prospectus or for additional information; (ii) the Company will prepare and file with the Commission, promptly upon the Sales Agent’s reasonable request, any amendments or supplements to the Registration Statement or Prospectus that, in the Sales Agent’s reasonable opinion, may be necessary or advisable in connection with the distribution of the Placement Shares by the Sales Agent (*provided, however*, that the failure of the Sales Agent to make such request shall not relieve the Company of any obligation or liability hereunder, or affect the Sales Agent’s right to rely on the representations and warranties made by the Company in this Agreement, and *provided, further*, that the only remedy the Sales Agent shall have with respect to the failure to make such filing shall be to cease making sales under this Agreement until such amendment or supplement is filed); (iii) the Company will not file any amendment or supplement to the Registration Statement or Prospectus, other than documents incorporated by reference, relating to the Placement Shares or a security convertible into the Placement Shares unless a copy thereof has been submitted to the Sales Agent within a reasonable period of time before the filing and the Sales Agent has not reasonably objected thereto (*provided, however*, that the failure of the Sales Agent to make such objection shall not relieve the Company of any obligation or liability hereunder, or affect the Sales Agent’s right to rely on the representations and warranties made by the Company in this Agreement, and *provided, further*, that the only remedy the Sales Agent shall have with respect to the failure by the Company to obtain such consent shall be to cease making sales under this Agreement); (iv) the Company will furnish to the Sales Agent at the time of filing thereof a copy of any document that upon filing is deemed to be incorporated by reference into the Registration Statement or Prospectus, except for those documents available via EDGAR; and (v) the Company will cause each amendment or supplement to the Prospectus, other than documents incorporated by reference, to be filed with the Commission as required pursuant to the applicable paragraph of Rule 424(b) of the Securities Act (without reliance on Rule 424(b)(8) of the Securities Act) or, in the case of any documents incorporated by reference, to be filed with the Commission as required pursuant to the Exchange Act, within the time period prescribed.

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(b) Notice of Commission Stop Orders. The Company will advise the Sales Agent, promptly after it receives notice or obtains knowledge thereof, of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or any notice objecting to, or other order preventing or suspending the use of, the Prospectus, of the suspension of the qualification of the Placement Shares for offering or sale in any jurisdiction, or of the initiation of any proceeding for any such purpose or any examination pursuant to Section 8(e) of the Securities Act, or if the Company becomes the subject of a proceeding under Section 8A of the Securities Act in connection with the offering of the Placement Shares; and it will promptly use its commercially reasonable efforts to prevent the issuance of any stop order or to obtain its withdrawal if such a stop order should be issued. Until such time as any stop order is lifted, the Sales Agent shall cease making offers and sales under this Agreement.

(c) Delivery of Prospectus; Subsequent Changes. During any period in which a Prospectus relating to the Placement Shares is required to be delivered by the Sales Agent under the Securities Act with respect to a pending sale of the Placement Shares (including in circumstances where such requirement may be satisfied pursuant to Rule 153 or Rule 172 under the Securities Act), the Company will comply in all material respects with all requirements imposed upon it by the Securities Act, as from time to time in force, and to file on or before their respective due dates all reports and any definitive proxy or information statements required to be filed by the Company with the Commission pursuant to Sections 13(a), 13(c), 14, 15(d) or any other provision of or under the Exchange Act. If during such period any event occurs as a result of which the Prospectus as then amended or supplemented would include an untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances then existing, not misleading, or if during such period it is necessary to amend or supplement the Registration Statement or Prospectus to comply with the Securities Act, the Company will promptly notify the Sales Agent to suspend the offering of Placement Shares during such period and the Company will promptly amend or supplement the Registration Statement or Prospectus (at the expense of the Company) so as to correct such statement or omission or effect such compliance; *provided, however*, that the Company may delay any such amendment or supplement if, in the reasonable judgment of the Company, it is in the best interests of the Company to do so.

(d) Listing of Placement Shares. During any period in which the Prospectus relating to the Placement Shares is required to be delivered by the Sales Agent under the Securities Act with respect to a pending sale of the Placement Shares (including in circumstances where such requirement may be satisfied pursuant to Rule 153 or Rule 172 under the Securities Act), the Company will use its commercially reasonable efforts to cause the Placement Shares to be listed on the Exchange and to qualify the Placement Shares for sale under the securities laws of such jurisdictions as the Sales Agent reasonably designates and to continue such qualifications in effect so long as required for the distribution of the Placement Shares; *provided, however*, that the Company shall not be required in connection therewith to qualify as a foreign corporation or dealer in securities or file a general consent to service of process in any jurisdiction.

(e) Delivery of Registration Statement and Prospectus. The Company will furnish to the Sales Agent and its counsel (at the expense of the Company) copies of the Registration Statement, the Prospectus (including all documents incorporated by reference therein) and all amendments and supplements to the Registration Statement or Prospectus that are filed with the Commission during any period in which a Prospectus relating to the Placement Shares is required to be delivered under the Securities Act (including all documents filed with the Commission during such period that are deemed to be incorporated by reference therein), in each case as soon as reasonably practicable and in such quantities as the Sales Agent may from time to time reasonably request and, at the Sales Agent's request, will also furnish copies of the Prospectus to each exchange or market on which sales of the Placement Shares may be made; *provided, however*, that the Company shall not be required to furnish any document (other than the Prospectus) to the Sales Agent to the extent such document is available on EDGAR.

(f) Earnings Statement. The Company will make generally available to its security holders as soon as practicable, but in any event not later than 15 months after the end of the Company's current fiscal quarter, an earnings statement of the Company (which need not be audited) covering a 12-month period that complies with Section 11(a) and Rule 158 of the Securities Act. The terms "earnings statement" and "make generally available to its security holders" shall have the meanings set forth in Rule 158 under the Securities Act.

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(g) Expenses. The Company, whether or not the transactions contemplated hereunder are consummated or this Agreement is terminated in accordance with the provisions of Section 11 hereunder, will pay the following expenses all incident to the performance of its obligations hereunder, including, but not limited to, expenses relating to (i) the preparation, printing and filing of the Registration Statement and each amendment and supplement thereto, of each Prospectus and of each amendment and supplement thereto, (ii) the preparation, issuance and delivery of the Placement Shares, including any stock or other transfer taxes and any stamp or other duties payable upon the sale, issuance or delivery of the Placement Shares to the Sales Agent, (iii) the fees and disbursements of the counsel, accountants and other advisors to the Company in connection with the transactions contemplated by this Agreement; (iv) the qualification of the Placement Shares under securities laws in accordance with the provisions of Section 7(d) of this Agreement, including filing fees (*provided, however*, that any fees or disbursements of counsel for the Sales Agent in connection therewith shall be paid by the Sales Agent except as set forth in (ix) below), (v) the printing and delivery to the Sales Agent of copies of the Prospectus and any amendments or supplements thereto, and of this Agreement, (vi) the fees and expenses incurred in connection with the listing or qualification of the Placement Shares for trading on the Exchange, (vii) the fees and expenses of the transfer agent or registrar for the Common Stock; (viii) filing fees and expenses, if any, of the Commission and the FINRA Corporate Financing Department (*provided, however*, that any fees or disbursements of counsel for the Sales Agent in connection therewith shall be paid by the Sales Agent except as set forth in (ix) below) and (ix) the Company shall reimburse the Sales Agent for its reasonable and documented out-of-pocket expenses (including, but not limited to, the reasonable and documented fees and expenses of counsel to the Sales Agent) in an amount up to \$50,000. In addition, the Company shall pay the Agent up to \$1,250 for its legal fees for each quarter the Offering is open and during which sales under the Agreement have occurred.

(h) Use of Proceeds. The Company will use the Net Proceeds as described in the Prospectus in the section entitled "Use of Proceeds."

(i) Notice of Other Sales. The Company (i) shall provide the Sales Agent notice as promptly as reasonably possible before it offers to sell, contracts to sell, sells, grants any option to sell or otherwise disposes of any shares of Common Stock (other than Placement Shares offered pursuant to the provisions of this Agreement) or securities convertible into or exchangeable for Common Stock, or warrants or any rights to purchase or acquire Common Stock, during the period beginning on the fifth (5th) Trading Day immediately prior to the date on which any Placement Notice is delivered to the Sales Agent hereunder and ending on the fifth (5th) Trading Day immediately following the final Settlement Date with respect to Placement Shares sold pursuant to such Placement Notice (or, if the Placement Notice has been terminated or suspended prior to the sale of all Placement Shares covered by a Placement Notice, the fifth (5th) Trading Day immediately following the date of such suspension or termination), and (ii) will not directly or indirectly in any other "at-the-market" or continuous equity transaction offer to sell, sell, contract to sell, grant any option to sell or otherwise dispose of any shares of Common Stock (other than the Placement Shares offered pursuant to this Agreement) or securities convertible into or exchangeable for shares of Common Stock, warrants or any rights to purchase or acquire, shares of Common Stock prior to the termination of this Agreement; *provided, however*, that such notice requirements or restrictions, as the case may be, will not be required in connection with the Company's issuance or sale of (A) shares of Common Stock, options to purchase shares of Common Stock, other equity awards or shares of Common Stock issuable upon the exercise of options or other equity awards, pursuant to any employee or director stock option or benefits plan, stock ownership plan or dividend reinvestment plan of the Company whether now in effect or hereafter implemented, (B) shares of Common Stock issuable upon exchange, conversion or redemption of securities or the exercise of warrants, options or other rights in effect or outstanding, and disclosed in filings by the Company available on EDGAR or otherwise in writing (including by email correspondence) to the Sales Agent and (C) shares of Common Stock or securities convertible into or exchangeable for shares of Common Stock as consideration for mergers, acquisitions, sale or purchase of assets or other business combinations or strategic alliances occurring after the date of this Agreement which are not issued for capital raising purposes. Notwithstanding the foregoing, the Company shall provide the Sales Agent notice at least two (2) days prior to pursuing any private or public offerings of equity and/or other securities (including debt securities) in one or more transactions.

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(j) Change of Circumstances. The Company will, at any time during a fiscal quarter in which the Company intends to tender a Placement Notice or sell Placement Shares, advise the Sales Agent promptly after it shall have received notice or obtained knowledge thereof, of any information or fact that would alter or affect in any material

respect any opinion, certificate, letter or other document provided to the Sales Agent pursuant to this Agreement.

(k) Due Diligence Cooperation. The Company will cooperate with any reasonable due diligence review conducted by the Sales Agent or its agents in connection with the transactions contemplated hereby, including, without limitation, providing information and making available documents and senior corporate officers, during regular business hours and at the Company's principal offices, as the Sales Agent may reasonably request.

(l) Required Filings Relating to Placement of Placement Shares. The Company shall set forth in each Annual Report on Form 10-K and Quarterly Report on Form 10-Q filed by the Company with the Commission in respect of any quarter in which sales of Placement Shares were made by or through the Sales Agent under this Agreement, with regard to the relevant period, the amount of Placement Shares sold to or through the Sales Agent, the Net Proceeds to the Company and the compensation payable by the Company to the Sales Agent with respect to such sales of Placement Shares. To the extent that the filing of a prospectus supplement with the Commission with respect to any sales of Placement Shares becomes required under Rule 424(b) under the Securities Act, the Company agrees that, on or before such dates as the Securities Act shall require, the Company will (i) file a prospectus supplement with the Commission under the applicable paragraph of Rule 424(b) under the Securities Act, which prospectus supplement will set forth, with regard to the relevant period, the amount of Placement Shares sold to or through the Sales Agent, the Net Proceeds to the Company and the compensation payable by the Company to the Sales Agent with respect to such Placement Shares, and (ii) deliver such number of copies of each such prospectus supplement to each exchange or market on which such sales were effected as may be required by the rules or regulations of such exchange or market. The Company shall afford the Sales Agent and its counsel with a reasonable opportunity to review and comment upon, shall consult with the Sales Agent and its counsel on the form and substance of, and shall give due consideration to all such comments from the Sales Agent or its counsel on, any such filing prior to the issuance, filing or public disclosure thereof; provided, however, that the Company shall not be required to submit for review (A) any portion of any periodic reports filed with the Commission under the Exchange Act other than the specific disclosure relating to any sales of Placement Shares and (B) any disclosure contained in periodic reports filed with the Commission under the Exchange Act if it shall have previously provided the same disclosure for review in connection with a previous filing.

(m) Representation Dates; Certificate. On or prior to the date the first Placement Notice is given hereunder and each time the Company (i) files the Prospectus relating to the Placement Shares or amends or supplements the Registration Statement or the Prospectus relating to the Placement Shares (other than (A) a prospectus supplement filed in accordance with Section 7(l) of this Agreement or (B) a supplement or amendment that relates to an offering of securities other than the Placement Shares) by means of a post-effective amendment, sticker, or supplement but not by means of incorporation of document(s) by reference to the Registration Statement or the Prospectus relating to the Placement Shares; (ii) files an annual report on Form 10-K under the Exchange Act (including any Form 10-K/A containing amended financial information or a material amendment to the previously filed Form 10-K); (iii) files a quarterly report on Form 10-Q under the Exchange Act; or (iv) files a current report on Form 8-K containing amended financial information (other than an earnings release, to "furnish" information pursuant to Items 2.02 or 7.01 of Form 8-K or to provide disclosure pursuant to Item 8.01 of Form 8-K relating to the reclassification of certain properties as discontinued operations in accordance with Statement of Financial Accounting Standards No. 144) under the Exchange Act (each date of filing of one or more of the documents referred to in clauses (i) through (iv) shall be a "**Representation Date**"), the Company shall furnish the Sales Agent within three (3) Trading Days after each Representation Date with a certificate, in the form attached hereto as Exhibit 7(m). The requirement to provide a certificate under this Section 7(m) shall be waived for any Representation Date occurring at a time at which no Placement Notice is pending, which waiver shall continue until the earlier to occur of the date the Company delivers a Placement Notice hereunder (which for such calendar quarter shall be considered a Representation Date) and the next occurring Representation Date; *provided, however*, that such waiver shall not apply for any Representation Date on which the Company files its annual report on Form 10-K. Notwithstanding the foregoing, if the Company subsequently decides to sell Placement Shares following a Representation Date when the Company relied on such waiver and did not provide the Sales Agent with a certificate under this Section 7(m), then before the Company delivers the Placement Notice or the Sales Agent sells any Placement Shares, the Company shall provide the Sales Agent with a certificate, in the form attached hereto as Exhibit 7(m), dated the date of the Placement Notice.

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(n) Legal Opinion. On or prior to the date the first Placement Notice is given hereunder, the Company shall cause to be furnished to the Sales Agent (i) the written opinion and negative assurance of TroyGould PC, as counsel to the Company, or other counsel reasonably satisfactory to the Sales Agent ("**Company Counsel**"), and (ii) the written opinion and negative assurance of Dechert LLP, intellectual property counsel to the Company, or other counsel reasonably satisfactory to the Sales Agent ("**Intellectual Property Counsel**"), in each case substantially in the forms previously agreed between the Company and the Sales Agent. Thereafter, within three (3) Trading Days after each Representation Date with respect to which the Company is obligated to deliver a certificate pursuant to Section 7(m) for which no waiver is applicable pursuant to Section 7(m), and not more than once per calendar quarter, the Company shall cause to be furnished to the Sales Agent the written opinion and negative assurance of each Company Counsel and Intellectual Property Counsel substantially in the forms previously agreed between the Company and the Sales Agent, modified, as necessary, to relate to the Registration Statement and the Prospectus as then amended or supplemented; *provided, however*, that if each Company Counsel and Intellectual Property Counsel has previously furnished to the Sales Agent such written opinion and negative assurance of such counsel, in each case substantially in the forms previously agreed between the Company and the Sales Agent, then each Company Counsel and Intellectual Property Counsel may, in respect of any future Representation Date, furnish the Sales Agent with a letter signed by such counsel (each, a "**Reliance Letter**") in lieu of such opinion and negative assurance of such counsel to the effect that the Sales Agent may rely on the prior opinion and negative assurance of such counsel delivered pursuant to this Section 7(n) to the same extent as if it were dated the date of such Reliance Letter (except that statements in such prior opinion and negative assurance shall be deemed to relate to the Registration Statement and the Prospectus as amended or supplemented to the date of such Reliance Letter).

(o) Comfort Letter. On or prior to the date the first Placement Notice is given hereunder and within three (3) Trading Days after each subsequent Representation Date with respect to which the Company is obligated to deliver a certificate pursuant to Section 7(m) for which no waiver is applicable pursuant to Section 7(m), other than a Representation Date under Section 7(m)(iii) or Section 7(m)(iv) unless with respect to a Representation Date under Section 7(m)(iv) the Sales Agent reasonably requests delivery thereof, the Company shall cause its independent accountants to furnish the Sales Agent letters (the "**Comfort Letters**"), dated the date that the Comfort Letter is delivered, in form and substance satisfactory to the Sales Agent, (i) confirming that they are an independent registered public accounting firm within the meaning of the Securities Act, the Exchange Act and the rules and regulations of the PCAOB and are in compliance with the applicable requirements relating to the qualification of accountants under Rule 2-01 of Regulation S-X of the Commission, (ii) stating, as of such date, the conclusions and findings of such firm with respect to the financial information and other matters ordinarily covered by accountants' "comfort letters" to the Sales Agent in connection with registered public offerings (the first such letter, the "**Initial Comfort Letter**") and (iii) updating the Initial Comfort Letter with any information that would have been included in the Initial Comfort Letter had it been given on such date and modified as necessary to relate to the Registration Statement and the Prospectus, as amended and supplemented to the date of such letter.

(p) Market Activities. The Company will not, directly or indirectly, (i) take any action designed to cause or result in, or that constitutes or might reasonably be expected to constitute, the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Common Stock or (ii) sell, bid for, or purchase shares of Common Stock in violation of Regulation M, or pay anyone any compensation for soliciting purchases of the Placement Shares other than the Sales Agent.

(q) Insurance. The Company shall maintain insurance in such amounts and covering such risks as is reasonable and customary for the business in which it is engaged.

(r) Investment Company Act. The Company will conduct its affairs in such a manner so as to reasonably ensure that it is not and, after giving effect to the offering and sale of the Placement Shares and the application of proceeds therefrom as described in the Prospectus, will not be, an "investment company" within the meaning of such term under the Investment Company Act.

(s) Securities Act and Exchange Act. The Company will use its reasonable best efforts to comply with all requirements imposed upon it by the Securities Act and the Exchange Act as from time to time in force, so far as necessary to permit the continuance of sales of, or dealings in, the Placement Shares as contemplated by the provisions hereof and the Prospectus.

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(t) No Offer to Sell. Other than the Prospectus and an Issuer Free Writing Prospectus approved in advance by the Company and the Sales Agent in its capacity as principal or agent hereunder, neither the Sales Agent nor the Company (including its agents and representatives, other than the Sales Agent in its capacity as such) will make, use, prepare, authorize, approve or refer to any written communication (as defined in Rule 405 under the Securities Act), required to be filed with the Commission, that constitutes an offer to sell or solicitation of an offer to buy Placement Shares hereunder.

(u) Sarbanes-Oxley Act. The Company will use its reasonable best efforts to comply with all effective applicable provisions of the Sarbanes-Oxley Act.

(v) Transfer Agent. The Company shall maintain, at its sole expense, a registrar and transfer agent for the Common Stock.

8. Conditions to the Sales Agent's Obligations. The obligations of the Sales Agent hereunder with respect to a Placement will be subject to the continuing accuracy and completeness of the representations and warranties made by the Company herein, to the due performance by the Company of its obligations hereunder, to the completion by the Sales Agent of a due diligence review satisfactory to the Sales Agent in its reasonable judgment, and to the continuing satisfaction (or waiver by the Sales Agent in its sole discretion) of the following additional conditions:

(a) Registration Statement Effective. The Registration Statement shall be effective and shall be available for the sale of all Placement Shares contemplated to be issued by any Placement Notice.

(b) Securities Act Filings Made. The Company shall have filed with the Commission the ATM Prospectus pursuant to Rule 424(b) under the Securities Act not later than the Commission's close of business on the second Business Day following the date of this Agreement. All other filings with the Commission required by Rule 424(b) or Rule 433 under the Securities Act to have been filed prior to the issuance of any Placement Notice hereunder shall have been made within the applicable time period prescribed for such filing by Rule 424(b) (without reliance on Rule 424(b)(8) of the Securities Act) or Rule 433, as applicable.

(c) No Material Notices. None of the following events shall have occurred and be continuing: (i) receipt by the Company of any request for additional information from the Commission or any other federal or state governmental authority during the period of effectiveness of the Registration Statement, the response to which would require any post-effective amendments or supplements to the Registration Statement or the Prospectus; (ii) the issuance by the Commission or any other federal or state governmental authority of any stop order suspending the effectiveness of the Registration Statement or the initiation of any proceedings for that purpose; (iii) receipt by the Company of any notification with respect to the suspension of the qualification or exemption from qualification of any of the Placement Shares for sale in any jurisdiction or the initiation or threatening of any proceeding for such purpose; (iv) the occurrence of any event that makes any material statement made in the Registration Statement or the Prospectus or any material document incorporated or deemed to be incorporated therein by reference untrue in any material respect or that requires the making of any changes in the Registration Statement, related Prospectus or such documents so that, in the case of the Registration Statement, it will not contain any materially 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, that in the case of the Prospectus, it will not contain any materially untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(d) No Misstatement or Material Omission. The Sales Agent shall not have advised the Company that the Registration Statement or Prospectus, or any amendment or supplement thereto, contains an untrue statement of fact that in the Sales Agent's reasonable opinion is material, or omits to state a fact that in the Sales Agent's reasonable opinion is material and is required to be stated therein or is necessary to make the statements therein not misleading.

(e) Material Changes. Except as contemplated in the Prospectus, or disclosed in the Company's reports filed with the Commission, there shall not have been any material adverse change in the authorized capital stock of the Company or any Material Adverse Change or any development that could reasonably be expected to result in a Material Adverse Change, the effect of which, in the case of any such action by a rating organization described above, in the reasonable judgment of the Sales Agent (without relieving the Company of any obligation or liability it may otherwise have), is so material as to make it impracticable or inadvisable to proceed with the offering of the Placement Shares on the terms and in the manner contemplated by this Agreement and the Prospectus.

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(f) Representation Certificate. The Sales Agent shall have received the certificate required to be delivered pursuant to Section 7(m) on or before the date on which delivery of such certificate is required pursuant to Section 7(m).

(g) Legal Opinions. The Sales Agent shall have received the opinion and negative assurance of each Company Counsel and Intellectual Property Counsel required to be delivered pursuant to Section 7(n) on or before the date on which such delivery of such opinion and negative assurance is required pursuant to Section 7(n).

(h) Comfort Letter. The Sales Agent shall have received the Comfort Letter required to be delivered pursuant to Section 7(o) on or before the date on which such delivery of such Comfort Letter is required pursuant to Section 7(o).

(i) Officer's Certificate. On or prior to the date the first Placement Notice is given hereunder, the Sales Agent shall have received a certificate, signed on behalf of the Company by its President and Chief Executive Officer, certifying as to (i) the articles of incorporation of the Company (as the same may be amended or restated from time to time), (ii) the bylaws of the Company (as the same may be amended or restated from time to time), (iii) the resolutions of the Board of Directors of the Company (or a committee thereof) authorizing the execution, delivery and performance of this Agreement and the issuance of the Placement Shares and (iv) the incumbency of the officers duly authorized to execute this Agreement and the other documents contemplated by this Agreement.

(j) No Suspension. Trading in the Common Stock shall not have been suspended on the Exchange and the Common Stock shall not have been delisted from the Exchange.

(k) Other Materials. On each date on which the Company is required to deliver a certificate pursuant to Section 7(m), the Company shall have furnished to the Sales Agent such appropriate further opinions, certificates, letters and documents as the Sales Agent may have reasonably requested. All such opinions, certificates, letters and other documents shall have been in compliance with the provisions hereof. The Company will furnish the Sales Agent with such conformed copies of such opinions, certificates, letters and other documents as the Sales Agent shall have reasonably requested.

(l) Approval for Listing. The Placement Shares shall either have been (i) approved for listing on the Exchange, subject only to notice of issuance, or (ii) the Company shall have filed an application for listing of the Placement Shares on the Exchange at, or prior to, the issuance of any Placement Notice.

(m) No Termination Event. There shall not have occurred any event that would permit the Sales Agent to terminate this Agreement pursuant to Section 11(a).

9. Indemnification and Contribution

(a) Company Indemnification. The Company agrees to indemnify and hold harmless the Sales Agent, the directors, officers, members, partners, employees and agents of the Sales Agent each broker dealer affiliate of the Sales Agent, and each the Sales Agent Affiliate, if any, from and against any and all losses, claims, liabilities, expenses and damages (including, but not limited to, any and all reasonable investigative, legal and other expenses incurred in connection with, and any and all amounts paid in settlement (in

accordance with Section 9(c) of, any action, suit or proceeding between any of the indemnified parties and any indemnifying parties or between any indemnified party and any third party, or otherwise, or any claim asserted), as and when incurred, to which the Sales Agent, or any such person, may become subject under the Securities Act, the Exchange Act or other federal or state statutory law or regulation, at common law or otherwise, insofar as such losses, claims, liabilities, expenses or damages arise out of or are based, directly or indirectly, on (x) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement or the Prospectus or any amendment or supplement thereto or in any Issuer Free Writing Prospectus or in any application or other document executed by or on behalf of the Company or based on written information furnished by or on behalf of the Company filed in any jurisdiction in order to qualify the Common Stock under the securities laws thereof or filed with the Commission, (y) the omission or alleged omission to state in any such document a material fact required to be stated in it or necessary to make the statements in it not misleading or (z) any breach by any of the indemnifying parties of any of their respective representations, warranties and agreements contained in this Agreement; *provided, however*, that this indemnity agreement shall not apply to the extent that such loss, claim, liability, expense or damage arises from the sale of the Placement Shares pursuant to this Agreement and is caused directly by an untrue statement or omission made in reliance upon and in strict conformity with written information relating to the Sales Agent and furnished to the Company by the Sales Agent expressly for inclusion in any document as described in clause (x) of this Section 9(a). This indemnity agreement will be in addition to any liability that the Company might otherwise have.

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(b) The Sales Agent Indemnification. The Sales Agent agrees to indemnify and hold harmless the Company and its directors and each officer of the Company that signed the Registration Statement, and each person, if any, who (i) controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act or (ii) is controlled by or is under common control with the Company (each, a "Company Affiliate") from and against any and all losses, claims, liabilities, expenses and damages (including, but not limited to, any and all reasonable investigative, legal and other expenses incurred in connection with, and any and all amounts paid in settlement (in accordance with Section 9(c)) of, any action, suit or proceeding between any of the indemnified parties and any indemnifying parties or between any indemnified party and any third party, or otherwise, or any claim asserted), as and when incurred, to which any such Company Affiliate, may become subject under the Securities Act, the Exchange Act or other federal or state statutory law or regulation, at common law or otherwise, insofar as such losses, claims, liabilities, expenses or damages arise out of or are based, directly or indirectly, on (x) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement or the Prospectus or any amendment or supplement thereto, or (y) the omission or alleged omission to state in any such document a material fact required to be stated in it or necessary to make the statements in it not misleading; *provided, however*, that this indemnity agreement shall apply only to the extent that such loss, claim, liability, expense or damage is caused directly by an untrue statement or omission made in reliance upon and in strict conformity with written information relating to the Sales Agent and furnished to the Company by the Sales Agent expressly for inclusion in any document as described in clause (x) of this Section 9(b).

(c) Procedure. Any party that proposes to assert the right to be indemnified under this Section 9 will, promptly after receipt of notice of commencement of any action against such party in respect of which a claim is to be made against an indemnifying party or parties under this Section 9, notify each such indemnifying party of the commencement of such action, enclosing a copy of all papers served, but the omission so to notify such indemnifying party will not relieve the indemnifying party from (i) any liability that it might have to any indemnified party otherwise than under this Section 9 and (ii) any liability that it may have to any indemnified party under the foregoing provision of this Section 9 unless, and only to the extent that, such omission results in the forfeiture of substantive rights or defenses by the indemnifying party. If any such action is brought against any indemnified party and it notifies the indemnifying party of its commencement, the indemnifying party will be entitled to participate in and, to the extent that it elects by delivering written notice to the indemnified party promptly after receiving notice of the commencement of the action from the indemnified party, jointly with any other indemnifying party similarly notified, to assume the defense of the action, with counsel reasonably satisfactory to the indemnified party, and after notice from the indemnifying party to the indemnified party of its election to assume the defense, the indemnifying party will not be liable to the indemnified party for any legal or other expenses except as provided below and except for the reasonable costs of investigation subsequently incurred by the indemnified party in connection with the defense. The indemnified party will have the right to employ its own counsel in any such action, but the fees, expenses and other charges of such counsel will be at the expense of such indemnified party unless (1) the employment of counsel by the indemnified party has been authorized in writing by the indemnifying party, (2) the indemnified party has reasonably concluded (based on advice of counsel) that there may be legal defenses available to it or other indemnified parties that are different from or in addition to those available to the indemnifying party, (3) a conflict or potential conflict exists (based on advice of counsel to the indemnified party) between the indemnified party and the indemnifying party (in which case the indemnifying party will not have the right to direct the defense of such action on behalf of the indemnified party) or (4) the indemnifying party has not in fact employed counsel to assume the defense of such action within a reasonable time after receiving notice of the commencement of the action, in each of which cases the reasonable fees, disbursements and other charges of counsel will be at the expense of the indemnifying party or parties. It is understood that the indemnifying party or parties shall not, in connection with any proceeding or related proceedings in the same jurisdiction, be liable for the reasonable fees, disbursements and other charges of more than one separate firm admitted to practice in such jurisdiction at any one time for all such indemnified party or parties. All such fees, disbursements and other charges will be reimbursed by the indemnifying party promptly as they are incurred. An indemnifying party will not, in any event, be liable for any settlement of any action or claim effected without its written consent. No indemnifying party shall, without the prior written consent of each indemnified party, settle or compromise or consent to the entry of any judgment in any pending or threatened claim, action or proceeding relating to the matters contemplated by this Section 9 (whether or not any indemnified party is a party thereto), unless such settlement, compromise or consent includes an unconditional release of each indemnified party from all liability arising or that may arise out of such claim, action or proceeding.

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(d) Contribution. In order to provide for just and equitable contribution in circumstances in which the indemnification provided for in the foregoing paragraphs of this Section 9 is applicable in accordance with its terms but for any reason is held to be unavailable from the Company or the Sales Agent, the Company and the Sales Agent will contribute to the total losses, claims, liabilities, expenses and damages (including any investigative, legal and other expenses reasonably incurred in connection with, and any amount paid in settlement of, any action, suit or proceeding or any claim asserted, but after deducting any contribution received by the Company from persons other than the Sales Agent, such as persons who control the Company within the meaning of the Securities Act, officers of the Company who signed the Registration Statement and directors of the Company, who also may be liable for contribution) to which the Company and the Sales Agent may be subject in such proportion as shall be appropriate to reflect the relative benefits received by the Company on the one hand and the Sales Agent on the other. The relative benefits received by the Company on the one hand and the Sales Agent on the other hand shall be deemed to be in the same proportion as the total Net Proceeds from the sale of the Placement Shares (before deducting expenses) received by the Company bear to the total compensation received by the Sales Agent from the sale of Placement Shares on behalf of the Company. If, but only if, the allocation provided by the foregoing sentence is not permitted by applicable law, the allocation of contribution shall be made in such proportion as is appropriate to reflect not only the relative benefits referred to in the foregoing sentence but also the relative fault of the Company, on the one hand, and the Sales Agent, on the other, with respect to the statements or omission that resulted in such loss, claim, liability, expense or damage, or action in respect thereof, as well as any other relevant equitable considerations with respect to such offering. Such relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact relates to information supplied by the Company or the Sales Agent, the intent of the parties and their relative knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company and the Sales Agent agree that it would not be just and equitable if contributions pursuant to this Section 9(d) were to be determined by pro rata allocation or by any other method of allocation that does not take into account the equitable considerations referred to herein. The amount paid or payable by an indemnified party as a result of the loss, claim, liability, expense, or damage, or action in respect thereof, referred to above in this Section 9(d) shall be deemed to include, for the purpose of this Section 9(d), any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending any such action or claim to the extent consistent with Section 9(c) hereof. Notwithstanding the foregoing provisions of this Section 9(d), the Sales Agent shall not be required to contribute any amount in excess of the commissions received by it under this Agreement and no person found guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) will be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. For purposes of this Section 9(d), any person who controls a party to this Agreement within the meaning of the Securities Act will have the same rights to contribution as that party (and any officers, directors, members, partners, employees or agents of the Sales Agent and each broker dealer affiliate of the Sales Agent will have the same rights to contribution as the Sales Agent), and each officer of the Company who signed the Registration Statement and each director of the Company will have the same rights to contribution as the Company,

subject in each case to the provisions hereof. Any party entitled to contribution, promptly after receipt of notice of commencement of any action against such party in respect of which a claim for contribution may be made under this Section 9(d), will notify any such party or parties from whom contribution may be sought, but the omission to so notify will not relieve that party or parties from whom contribution may be sought from any other obligation it or they may have under this Section 9(d) except to the extent that the failure to so notify such other party materially prejudiced the substantive rights or defenses of the party from whom contribution is sought. Except for a settlement entered into pursuant to the last sentence of Section 9(c) hereof, no party will be liable for contribution with respect to any action or claim settled without its written consent if such consent is required pursuant to Section 9(c) hereof.

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10. Representations and Agreements to Survive Delivery. The indemnity and contribution agreements contained in Section 9 of this Agreement and all representations and warranties of the Company herein or in certificates delivered pursuant hereto shall survive, as of their respective dates, regardless of (i) any investigation made by or on behalf of the Sales Agent, any controlling person of the Sales Agent, or the Company (or any of their respective officers, directors, members or controlling persons), (ii) delivery and acceptance of the Placement Shares and payment therefor or (iii) any termination of this Agreement.

11. Termination.

(a) The Sales Agent shall have the right by giving notice as hereinafter specified at any time to terminate this Agreement if (i) any Material Adverse Change, or any development that could reasonably be expected to result in a Material Adverse Change has occurred that, in the reasonable judgment of the Sales Agent, may materially impair the ability of the Sales Agent to sell the Placement Shares hereunder, (ii) the Company shall have failed, refused or been unable to perform any agreement on its part to be performed hereunder; *provided, however*, in the case of any failure of the Company to deliver (or cause another person to deliver) any certification, opinion, or letter required under Sections 7(m), 7(n), 7(o) or 8(i), the Sales Agent's right to terminate shall not arise unless such failure to deliver (or cause to be delivered) continues for more than thirty (30) days from the date such delivery was required, (iii) any other condition of the Sales Agent's obligations hereunder is not fulfilled, or (iv) any suspension or limitation of trading in the Placement Shares or in securities generally on the Exchange shall have occurred (including automatic halt in trading pursuant to market-decline triggers, other than those in which solely program trading is temporarily halted), or a major disruption of securities settlements or clearing services in the United States shall have occurred, or minimum prices for trading have been fixed on the Exchange. Any such termination shall be without liability of any party to any other party except that the provisions of Section 7(g) (Expenses), Section 9 (Indemnification and Contribution), Section 10 (Representations and Agreements to Survive Delivery), Section 11(f), Section 16 (Applicable Law; Consent to Jurisdiction) and Section 17 (Waiver of Jury Trial) hereof shall remain in full force and effect notwithstanding such termination. If the Sales Agent elects to terminate this Agreement as provided in this Section 11(a), the Sales Agent shall provide the required notice as specified in Section 12 (Notices).

(b) The Company shall have the right, by giving thirty (30) days' notice as hereinafter specified in Section 12, to terminate this Agreement in its sole discretion at any time after the date of this Agreement. Any such termination shall be without liability of any party to any other party except that the provisions of Section 7(g), Section 9, Section 10, Section 11(f), Section 16 and Section 17 hereof shall remain in full force and effect notwithstanding such termination.

(c) The Sales Agent shall have the right, by giving thirty (30) days' notice as hereinafter specified in Section 12, to terminate this Agreement in its sole discretion at any time after the date of this Agreement. Any such termination shall be without liability of any party to any other party except that the provisions of Section 7(g), Section 9, Section 10, Section 11(f), Section 16 and Section 17 hereof shall remain in full force and effect notwithstanding such termination.

(d) Unless earlier terminated pursuant to this Section 11, this Agreement shall automatically terminate upon the earlier to occur of (i) issuance and sale of all of the Placement Shares to or through the Sales Agent on the terms and subject to the conditions set forth herein and (ii) the expiration of the Registration Statement on the third (3rd) anniversary of the initial effective date of the Registration Statement pursuant to Rule 415(a)(5) under the Securities Act; *provided* that the provisions of Section 7(g), Section 9, Section 10, Section 11(f), Section 16 and Section 17 hereof shall remain in full force and effect notwithstanding such termination.

(e) This Agreement shall remain in full force and effect unless terminated pursuant to Sections 11(a), (b), (c) or (d) above or otherwise by mutual agreement of the parties; *provided, however*, that any such termination by mutual agreement shall in all cases be deemed to provide that Section 7(g), Section 9, Section 10, Section 11(f), Section 16 and Section 17 shall remain in full force and effect.

(f) Any termination of this Agreement shall be effective on the date specified in such notice of termination; *provided, however*, that such termination shall not be effective until the close of business on the date of receipt of such notice by the Sales Agent or the Company, as the case may be. If such termination shall occur prior to the Settlement Date for any sale of Placement Shares, such termination shall not become effective until the close of business on such Settlement Date and such Placement Shares shall settle in accordance with the provisions of this Agreement.

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12. Notices. All notices or other communications required or permitted to be given by any party to any other party pursuant to the terms of this Agreement shall be in writing, unless otherwise specified, and if sent to the Sales Agent, shall be delivered to:

WestPark Capital, Inc.
1900 Avenue of the Stars, Suite 310
Los Angeles, California 90067
Attention: Head of Investment Banking
email: ckaufman@wpcapital.com

with a copy (which shall not constitute notice) to:

Sheppard Mullin Richter & Hampton LLP
30 Rockefeller Plaza
New York, New York 10112
Attention: Richard A. Friedman, Esq.
email: rafriedman@sheppardmullin.com

and if to the Company, shall be delivered to:

Lixte Biotechnology Holdings, Inc.
680 East Colorado Boulevard, Suite 180
Pasadena, California 91101
Attention: Chief Administrative Officer
email: eforman@lixte.com

with a copy (which shall not constitute notice) to:

TroyGould PC
1801 Century Park East, Suite 1600
Los Angeles, California 90067
Attention: David Ficksman
email: dficksman@troygould.com

Each party may change such address for notices by sending to the other party to this Agreement written notice of a new address for such purpose. Each such notice or other communication shall be deemed given (i) when delivered personally or by verifiable facsimile transmission (with an original to follow) on or before 4:30 p.m., New York City time, on a Business Day or, if such day is not a Business Day, on the next succeeding Business Day, (ii) on the next Business Day after timely delivery to a nationally-recognized overnight courier and (iii) on the Business Day actually received if deposited in the U.S. mail (certified or registered mail, return receipt requested, postage prepaid). For purposes of this Agreement, "**Business Day**" shall mean any day on which the Exchange and commercial banks in the City of New York are open for business.

An electronic communication ("**Electronic Notice**") shall be deemed written notice for purposes of this Section 12 if sent to the electronic mail address specified by the receiving party under separate cover. Electronic Notice shall be deemed received at the time the party sending Electronic Notice receives confirmation of receipt by the receiving party (other than pursuant to auto-reply). Any party receiving Electronic Notice may request and shall be entitled to receive the notice on paper, in a nonelectronic form ("**Nonelectronic Notice**") which shall be sent to the requesting party within ten (10) days of receipt of the written request for Nonelectronic Notice.

13. Successors and Assigns. This Agreement shall inure to the benefit of and be binding upon the Company and the Sales Agent and their respective successors and permitted assigns and, as to Sections 5(b) and 9, the other indemnified parties specified therein. References to any of the parties contained in this Agreement shall be deemed to include the successors and permitted assigns of such party. Nothing in this Agreement, express or implied, is intended to confer upon any other person any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided in this Agreement. Neither party may assign its rights or obligations under this Agreement without the prior written consent of the other party; *provided, however*, that the Sales Agent may assign its rights and obligations hereunder to an affiliate of the Sales Agent without obtaining the Company's consent.

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14. Adjustments for Share Splits. The parties acknowledge and agree that all share-related numbers contained in this Agreement shall be adjusted to take into account any share split, share dividend or similar event effected with respect to the Common Stock.

15. Entire Agreement; Amendment; Severability. This Agreement (including all schedules and exhibits attached hereto and Placement Notices issued pursuant hereto) and any other writing entered into by the parties relating to this Agreement constitutes the entire agreement and supersedes all other prior and contemporaneous agreements and undertakings, both written and oral, among the parties hereto with regard to the subject matter hereof. Neither this Agreement nor any term hereof may be amended except pursuant to a written instrument executed by the Company and the Sales Agent. In the event that any one or more of the provisions contained herein, or the application thereof in any circumstance, is held invalid, illegal or unenforceable as written by a court of competent jurisdiction, then such provision shall be given full force and effect to the fullest possible extent that it is valid, legal and enforceable, and the remainder of the terms and provisions herein shall be construed as if such invalid, illegal or unenforceable term or provision was not contained herein, but only to the extent that giving effect to such provision and the remainder of the terms and provisions hereof shall be in accordance with the intent of the parties as reflected in this Agreement.

16. Applicable Law; Consent to Jurisdiction. This Agreement shall be governed by, and construed in accordance with, the internal laws of the State of New York, without regard to the principles of conflicts of laws. Each party hereby irrevocably submits to the non-exclusive jurisdiction of the state and federal courts sitting in the City of New York, Borough of Manhattan, for the adjudication of any dispute hereunder or in connection with any transaction contemplated hereby, 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 (certified or registered mail, return receipt requested) to such party at the address in effect for notices to it under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law.

17. Waiver of Jury Trial. The Company and the Sales Agent each hereby irrevocably waives any right it may have to a trial by jury in respect of any claim based upon or arising out of this Agreement or any transaction contemplated hereby.

18. Absence of Fiduciary Relationship. The Company acknowledges and agrees that:

(a) the Sales Agent is acting solely as agent in connection with the sale of the Placement Shares contemplated by this Agreement and the process leading to such transactions, and no fiduciary or advisory relationship between the Company or any of its respective affiliates, stockholders (or other equity holders), creditors or employees or any other party, on the one hand, and the Sales Agent, on the other hand, has been or will be created in respect of any of the transactions contemplated by this Agreement, irrespective of whether the Sales Agent has advised or is advising the Company on other matters, and the Sales Agent has no obligation to the Company with respect to the transactions contemplated by this Agreement, except the obligations expressly set forth in this Agreement;

(b) the Company is capable of evaluating and understanding and understands and accepts the terms, risks and conditions of the transactions contemplated by this Agreement;

(c) the Sales Agent has not provided any legal, accounting, regulatory or tax advice with respect to the transactions contemplated by this Agreement, and the Company has consulted its own legal, accounting, regulatory and tax advisors to the extent it has deemed appropriate;

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(d) the Company has been advised and is aware that the Sales Agent and its affiliates are engaged in a broad range of transactions which may involve interests that differ from those of the Company and that the Sales Agent has no obligation to disclose such interests and transactions to the Company by virtue of any fiduciary, advisory or agency relationship; and

(e) the Company waives, to the fullest extent permitted by law, any claims it may have against the Sales Agent, for breach of fiduciary duty or alleged breach of fiduciary duty and agrees that the Sales Agent shall have no liability (whether direct or indirect, in contract, tort or otherwise) to the Company in respect of such a fiduciary claim or to any person asserting a fiduciary duty claim on behalf of or in right of the Company, including stockholders, partners, employees or creditors of the Company.

19. Use of Information. The Sales Agent may not provide any information gained in connection with this Agreement and the transactions contemplated by this Agreement, including due diligence, to any third party other than its legal counsel advising it on this Agreement unless expressly approved by the Company in writing.

20. Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Delivery of an executed Agreement by one party to the other may be made by facsimile transmission.

21. Effect of Headings; Knowledge of the Company. The section and Exhibit headings herein are for convenience only and shall not affect the construction hereof. All references in this Agreement to the "knowledge of the Company" or the "Company's knowledge" or similar qualifiers shall mean the actual knowledge of the directors and officers of the Company, after due inquiry.

22. Definitions. As used in this Agreement, the following term has the meaning set forth below:

(a) "Applicable Time" means the date of this Agreement, each Representation Date, each date on which a Placement Notice is given, each Point of Sale, and each Settlement Date.

[Remainder of Page Intentionally Blank]

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If the foregoing correctly sets forth the understanding between the Company and the Sales Agent, please so indicate in the space provided below for that purpose, whereupon this letter shall constitute a binding agreement between the Company and the Sales Agent.

Very truly yours,

LIXTE BIOTECHNOLOGY HOLDINGS, INC.

By: _____
Name:
Title:

ACCEPTED as of the date first-above written:

WESTPARK CAPITAL, INC.

By: _____
Name:
Title:

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SCHEDULE 1

Form of Placement Notice

From: Lixte Biotechnology Holdings, Inc.
To: WestPark Capital, Inc.
Attention: [●]
Subject: Placement Notice
Date: [●], 202[●]

Ladies and Gentlemen:

Pursuant to the terms and subject to the conditions contained in the Sales Agreement (the "Sales Agreement") between Lixte Biotechnology Holdings, Inc., a Delaware corporation (the "Company"), and WestPark Capital, Inc. (the "Sales Agent"), dated [●], 2021, the Company hereby requests that the Sales Agent sell up to [●] shares of the Company's common stock, par value \$0.001 per share (the "Placement Shares"), at a minimum market price of \$[●] per share, during the time period beginning [month, day, time] and ending [month, day, time] [and with no more than [●] Placement Shares sold in any one Trading Day].

[The Company may include such other sale parameters as it deems appropriate.]

Capitalized terms used and not defined herein shall have the respective meanings assigned to them in the Sales Agreement.

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SCHEDULE 2

Notice Parties

Lixte Biotechnology Holdings, Inc.

Eric Forman

eforman@lixte.com

With copies to:

[]

With copies to:

[]

SCHEDULE 3

Compensation

The Company shall pay to the Sales Agent in cash, upon each sale of Placement Shares through the Sales Agent pursuant to this Agreement, an amount equal to 2.5% of the aggregate gross proceeds from each sale of Placement Shares.*

* The foregoing rate of compensation shall not apply when the Sales Agent purchases Placement Shares on a principal basis, in which case the Company may sell the Placement Shares to the Sales Agent as principal at a price to be mutually agreed upon by the Company and the Sales Agent at the relevant Point of Sale pursuant to the applicable Placement Notice (it being hereby acknowledged and agreed that the Sales Agent shall be under no obligation to purchase Placement Shares on a principal basis pursuant to the Sales Agreement, except as otherwise agreed by the Sales Agent and the Company in writing and expressly set forth in a Placement Notice).

Exhibit 7(m)

OFFICER CERTIFICATE

The undersigned, the duly qualified and appointed _____ of Lixte Biotechnology Holdings, Inc., a Delaware corporation (the "Company"), does hereby certify in such capacity and on behalf of the Company, pursuant to Section 7(m) of the Sales Agreement, dated [], 2021 (the "Sales Agreement"), between the Company and WestPark Capital, Inc., that:

- (i) the representations and warranties of the Company in Section 6 of the Sales Agreement (A) to the extent such representations and warranties are subject to qualifications and exceptions contained therein relating to materiality or Material Adverse Change, are true and correct on and as of the date hereof with the same force and effect as if expressly made on and as of the date hereof, except for those representations and warranties that speak solely as of a specific date and which were true and correct as of such date, and (B) to the extent such representations and warranties are not subject to any qualifications or exceptions, are true and correct in all material respects as of the date hereof as if made on and as of the date hereof with the same force and effect as if expressly made on and as of the date hereof except for those representations and warranties that speak solely as of a specific date and which were true and correct as of such date;
- (ii) the Company has complied with all agreements and satisfied all conditions on its part to be performed or satisfied pursuant to the Sales Agreement at or prior to the date hereof;
- (iii) as of the date hereof, (i) the Registration Statement does not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein not misleading, (ii) the Prospectus does not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading and (iii) no event has occurred as a result of which it is necessary to amend or supplement the Registration Statement or the Prospectus in order to make the statements therein not untrue or misleading for clauses (i) and (ii) above, respectively, to be true and correct;
- (iv) there has been no Material Adverse Change since the date as of which information is given in the Prospectus, as amended or supplemented;
- (v) the Company will not be in possession of any material non-public information at the time of delivery of any Placement Notice and/or as long as such Placement Notice is effective; and
- (vi) the aggregate offering price of the Placement Shares that may be issued and sold pursuant to the Sales Agreement and the maximum number or amount of Placement Shares that may be sold pursuant to the Sales Agreement have been duly authorized by the Company's board of directors or a duly authorized committee thereof.

Terms used herein and not defined herein have the meanings ascribed to them in the Sales Agreement.

Dated: _____

By: _____

Name:

Title: