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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, DC 20549**

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**FORM 8-K**

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

**Date of Report (Date of earliest event reported): August 7, 2018**

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**ZOGENIX, INC.**

(Exact Name of Registrant as Specified in its Charter)

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**Delaware**  
(State or Other Jurisdiction  
of Incorporation)

**001-34962**  
(Commission  
File Number)

**20-5300780**  
(IRS Employer  
Identification No.)

**5858 Horton Street, #455, Emeryville, CA**  
(Address of Principal Executive Offices)

**94608**  
(Zip Code)

**Registrant's telephone number, including area code: (510) 550-8300**

(Former Name or Former Address, if Changed Since Last Report.)

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

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

Emerging growth company

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

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**Item 8.01 Other Events.**

On August 7, 2018, Zogenix, Inc. (“Zogenix” or the “Company”) entered into an underwriting agreement (the “Underwriting Agreement”) with Merrill Lynch, Pierce, Fenner & Smith Incorporated, Leerink Partners LLC and Stifel, Nicolaus & Company, Incorporated, as representatives of the several underwriters named therein (collectively, the “Underwriters”), relating to the issuance and sale of 6,000,000 shares of the Company’s common stock, par value \$0.001 per share (the “Common Stock”). The price to the public in this offering is \$52.00 per share. The Underwriters have agreed to purchase the shares from the Company pursuant to the Underwriting Agreement at a price of \$48.88 per share. The net proceeds to the Company from this offering are expected to be approximately \$292.9 million, after deducting underwriting discounts and commissions and estimated offering expenses payable by the Company. The offering is expected to close on or about August 10, 2018, subject to customary closing conditions. In addition, under the terms of the Underwriting Agreement, the Company has granted the Underwriters a 30-day option to purchase up to 900,000 additional shares of Common Stock.

The offering is being made pursuant to a shelf registration statement on Form S-3 (Registration Statement No. 333-220759) filed by the Company with the Securities and Exchange Commission (the “SEC”) that became automatically effective on October 2, 2017, and a prospectus supplement and accompanying prospectus filed with the SEC.

The Underwriting Agreement contains customary representations, warranties and agreements by the Company, customary conditions to closing, indemnification obligations of the Company and the Underwriters, including for liabilities under the Securities Act of 1933, as amended, other obligations of the parties and termination provisions. The representations, warranties and covenants contained in the Underwriting Agreement were made only for purposes of such agreement and as of specific dates, were solely for the benefit of the parties to such agreement, and may be subject to limitations agreed upon by the contracting parties.

The foregoing description of the Underwriting Agreement is not complete and is qualified in its entirety by reference to the full text of the Underwriting Agreement, a copy of which is filed as Exhibit 1.1 to this report and is incorporated by reference herein. A copy of the opinion of Latham & Watkins LLP relating to the legality of the issuance and sale of Common Stock in the offering is attached as Exhibit 5.1 to this report.

The Company issued press releases on August 6, 2018 announcing the commencement of the offering and on August 7, 2018 announcing the pricing of the offering, which press releases are attached as Exhibits 99.1 and 99.2, respectively, to this report.

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Zogenix cautions you that statements included in this report that are not a description of historical facts are forward-looking statements. These forward-looking statements include statements regarding the completion of the offering and the expected net proceeds therefrom. The inclusion of forward-looking statements should not be regarded as a representation by Zogenix that any of these results will be achieved. Actual results may differ from those set forth in this report due to the risks and uncertainties associated with market conditions and the satisfaction of customary closing conditions related to the offering, as well as risks and uncertainties inherent in Zogenix’s business, including those described in the Company’s other filings with the SEC. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof, and Zogenix undertakes no obligation to revise or update this report to reflect events or circumstances after the date hereof. All forward-looking statements are qualified in their entirety by this cautionary statement. This caution is made under the safe harbor provisions of Section 21E of the Private Securities Litigation Reform Act of 1995.

**Item 9.01 Financial Statements and Exhibits.**

(d) Exhibits.

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<u>Exhibit No.</u>	<u>Description</u>
1.1	<a href="#"><u>Underwriting Agreement, dated August 7, 2018, by and between Zogenix, Inc. and Merrill Lynch, Pierce, Fenner &amp; Smith Incorporated, Leerink Partners LLC and Stifel, Nicolaus &amp; Company, Incorporated, as representatives of the several underwriters named therein</u></a>
5.1	<a href="#"><u>Opinion of Latham &amp; Watkins LLP</u></a>
23.1	<a href="#"><u>Consent of Latham &amp; Watkins LLP (included in Exhibit 5.1)</u></a>
99.1	<a href="#"><u>Press Release dated August 6, 2018</u></a>
99.2	<a href="#"><u>Press Release dated August 7, 2018</u></a>

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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.

ZOGENIX, INC.

Date: August 8, 2018

By: /s/ Michael P. Smith

Name: Michael P. Smith

Title: Executive Vice President, Chief Financial Officer,  
Treasurer and Secretary

ZOGENIX, INC.

6,000,000 Shares  
Common Stock

UNDERWRITING AGREEMENT

Dated: August 7, 2018

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## Table of Contents

	<u>Page</u>
SECTION 1. Representations and Warranties	2
SECTION 2. Sale and Delivery to Underwriters; Closing	17
SECTION 3. Covenants of the Company	18
SECTION 4. Payment of Expenses	23
SECTION 5. Conditions of Underwriters' Obligations	23
SECTION 6. Indemnification	26
SECTION 7. Contribution	28
SECTION 8. Representations, Warranties and Agreements to Survive Delivery	29
SECTION 9. Termination of Agreement	29
SECTION 10. Default by One or More of the Underwriters	30
SECTION 11. Notices	30
SECTION 12. Parties	31
SECTION 13. Governing Law and Time	31
SECTION 14. Effect of Headings	31
SECTION 15. Definitions	31
SECTION 16. Permitted Free Writing Prospectuses	34
SECTION 17. Absence of Fiduciary Relationship	35
SECTION 18. Research Analyst Independence	35
SECTION 19. Consent to Jurisdiction	36
SECTION 20. Trial by Jury	36

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ZOGENIX, INC.

6,000,000 Shares  
Common Stock

UNDERWRITING AGREEMENT

August 7, 2018

MERRILL LYNCH, PIERCE, FENNER & SMITH  
INCORPORATED  
LEERINK PARTNERS LLC  
STIFEL, NICOLAUS & COMPANY, INCORPORATED  
As Representatives of the Several Underwriters

c/o Merrill Lynch, Pierce, Fenner & Smith  
Incorporated

One Bryant Park  
New York, New York 10036

c/o Leerink Partners LLC  
255 California Street  
12th Floor  
San Francisco, California 94111

c/o Stifel, Nicolaus & Company, Incorporated  
787 7th Avenue  
11th Floor  
New York, New York 10019

Ladies and Gentlemen:

Zogenix, Inc., a Delaware corporation (the "Company"), confirms its agreement with Merrill Lynch, Pierce, Fenner & Smith Incorporated ("Merrill Lynch"), Leerink Partners LLC ("Leerink"), Stifel, Nicolaus & Company, Incorporated ("Stifel") and each of the other Underwriters named in Schedule I hereto (collectively, the "Underwriters," which term shall also include any underwriter substituted as hereinafter provided in Section 10 hereof), for whom Merrill Lynch, Leerink and Stifel are acting as representatives (in such capacity, the "Representatives"), with respect to the issue and sale by the Company of 6,000,000 shares (the "Initial Securities") of the Company's common stock, par value \$0.001 per share (the "Common Stock"), and the purchase by the Underwriters, acting severally and not jointly, of the respective numbers of Initial Securities set forth in said Schedule I hereto, and with respect to the grant by the Company to the Underwriters, acting severally and not jointly, of the option described in Section 2(b) hereof to purchase all or any part of the 900,000 additional shares of Common Stock (the "Option Securities"). The Initial Securities to be purchased by the Underwriters and all or any part of the Option Securities are hereinafter called, collectively, the "Securities." Certain terms used in this Agreement are defined in Section 15 hereof.

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The Company understands that the Underwriters propose to make a public offering of the Securities as soon as the Representatives deem advisable after this Agreement has been executed and delivered.

In the event that the Company does not have any subsidiaries, then all references herein to “subsidiaries” or “a subsidiary” of the Company (other than the references appearing in Section 1(a)(7)) shall be disregarded, mutatis mutandis. In the event that the Company only has one subsidiary, then all references herein to “subsidiaries” of the Company shall be deemed to refer to such one subsidiary of the Company, mutatis mutandis.

The Company has prepared and previously delivered to you a preliminary prospectus supplement dated August 6, 2018 relating to the Securities and the Base Prospectus (as defined below) dated October 2, 2017. Such preliminary prospectus supplement and Base Prospectus, including the documents incorporated or deemed to be incorporated by reference therein pursuant to Item 12 of Form S-3 under the 1933 Act, are hereinafter called, collectively, the “Pre-Pricing Prospectus.” Promptly after the execution and delivery of this Agreement, the Company will prepare and file with the Commission a prospectus supplement dated August 7, 2018 (the “Prospectus Supplement”) and will file the Prospectus Supplement and the Base Prospectus with the Commission, all in accordance with the provisions of Rule 430B and Rule 424(b), and the Company has previously advised you of all information (financial and other) that will be set forth therein. The Prospectus Supplement and the Base Prospectus, in the form first furnished to the Underwriters for use in connection with the offering of the Securities (whether to meet the request of purchasers pursuant to Rule 173(d) or otherwise), including the documents incorporated or deemed to be incorporated by reference therein pursuant to Item 12 of Form S-3 under the 1933 Act, are herein called, collectively, the “Prospectus.”

#### SECTION 1. Representations and Warranties.

(a) *Representations and Warranties by the Company.* The Company represents and warrants to each Underwriter as of the date hereof, as of the Applicable Time, as of the Closing Date referred to in Section 2(c) hereof, and as of each Option Closing Date (if any) referred to in Section 2(b) hereof, and agrees with each Underwriter, as follows:

(1) Compliance with Registration Requirements. The Company meets the requirements for use of an “automatic shelf registration” as defined in Rule 405 of the rules and regulations of the 1933 Act (the “Rules and Regulations”) on Form S-3 under the 1933 Act and the Securities have been duly registered under the 1933 Act pursuant to the Registration Statement. Each of the Initial Registration Statement and any post-effective amendments thereto were effective upon filing under the 1933 Act and any Rule 462(b) Registration Statement has become effective under the 1933 Act or, not later than 8:00 a.m. (New York City time) on the business day immediately after the date of this Agreement, will become effective under the 1933 Act, and no stop order suspending the effectiveness of the Initial Registration Statement or any Rule 462(b) Registration Statement has been issued under the 1933 Act and no proceedings for that purpose have been instituted or are pending or, to the knowledge of the Company, are contemplated by the Commission, no notice of objection of the Commission to the use of such registration statement or any post-effective amendment thereto pursuant to Rule 401(g)(2) of the Rules and Regulations has been received by the Company (the prospectus filed as part of such automatic shelf registration statement in the form in which it has most recently been filed with the Commission on or prior to the date of this Agreement, is hereinafter called the “Base Prospectus”) and any request on the part of the Commission for additional information has been complied with. The Initial Registration Statement was initially filed with the Commission on October 2, 2017 and became effective upon filing.



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(2) Registration Statement, Prospectus and Disclosure at Time of Sale. At the respective times that the Initial Registration Statement (including for the avoidance of doubt, any Rule 462(b) Registration Statement) and any amendments thereto were filed and became effective, at each time subsequent to the filing of the Initial Registration Statement that the Company filed an Annual Report on Form 10-K (or any amendment thereto) with the Commission, at each deemed effective date with respect to the Underwriters pursuant to Rule 430B(f)(2), and at the Closing Date (and, if any Option Securities are purchased, at the applicable Option Closing Date), the Initial Registration Statement, any Rule 462(b) Registration Statement and any amendments to any of the foregoing complied and will comply in all material respects with the requirements of the 1933 Act and the 1933 Act Regulations and did not and 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 statements therein not misleading.

At the respective times the Prospectus or any amendment or supplement thereto was filed pursuant to Rule 424(b) or issued, at the Closing Date (and, if any Option Securities are purchased, at the applicable Option Closing Date), and at any time when a prospectus is required (or, but for the provisions of Rule 172, would be required) by applicable law to be delivered in connection with sales of Securities (whether to meet the requests of purchasers pursuant to Rule 173(d) or otherwise), neither the Prospectus nor any amendments or supplements thereto included or will include an untrue statement of a material fact or omitted or will omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

As of the Applicable Time (except in the case of clause (z) below) and as of each time prior to the Closing Date that an investor agrees (orally or in writing) to purchase or, if applicable, reconfirms (orally or in writing) an agreement to purchase any Securities from the Underwriters, neither (x) any Issuer General Use Free Writing Prospectuses, if any, issued at or prior to the Applicable Time, the Pre-Pricing Prospectus as of the Applicable Time and the information, if any, included on Schedule II hereto, all considered together (collectively, the “General Disclosure Package”), nor (y) any individual Issuer Limited Use Free Writing Prospectus, when considered together with the General Disclosure Package, nor (z) any Issuer General Use Free Writing Prospectuses issued subsequent to the Applicable Time, when considered together with the General Disclosure Package, included or will include an untrue statement of a material fact or omitted or will omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

Each preliminary prospectus and the Prospectus and any amendments or supplements to any of the foregoing filed as part of the Registration Statement or any amendment thereto, or filed pursuant to Rule 424 under the 1933 Act, or delivered to the Underwriters for use in connection with the offering of the Securities, complied when so filed or when so delivered, as the case may be, in all material respects with the 1933 Act and the 1933 Act Regulations.

The representations and warranties in the preceding paragraphs of this Section 1(a)(2) do not apply to statements in or omissions from the Registration Statement, any preliminary prospectus, the Prospectus or any Issuer Free Writing Prospectus or any amendment or supplement to any of the foregoing made in reliance upon and in conformity with written information furnished to the Company by any Underwriter through the Representatives expressly for use therein. For purposes of this Agreement, the only information furnished shall be the following information appearing under the sub-caption “Price Stabilization, Short Positions and Penalty Bids” under the caption “Underwriting” in the Pre-Pricing Prospectus, the General Disclosure Package and the Prospectus (the “Underwriter Information”).

At the respective times that the Initial Registration Statement, any Rule 462(b) Registration Statement or any amendment to any of the foregoing were filed and as of the earliest time

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after the filing of the Initial Registration Statement that the Company or any other offering participant made a bona fide offer of the Securities within the meaning of Rule 164(h)(2), and at the date hereof, the Company was not and is not an “ineligible issuer” as defined in Rule 405, in each case without taking into account any determination made by the Commission pursuant to paragraph (2) of the definition of such term in Rule 405; and without limitation to the foregoing, the Company has at all relevant times met, meets and will at all relevant times meet the requirements of Rule 164 for the use of a free writing prospectus (as defined in Rule 405) in connection with the offering contemplated hereby.

At the time of the filing of the Initial Registration Statement, at the time of the most recent amendment thereto for the purpose of complying with Section 10(a)(3) of the 1933 Act (whether such amendment was by post-effective amendment, an incorporated report filed pursuant to Section 1 or 15(d) of the 1934 Act or form of prospectus), at the time the Company or any person acting on its behalf (within the meaning, for this clause only, of Rule 163(c) of the Rules and Regulations) made any offer relating to the Securities in reliance on the exemption of Rule 163 of the Rules and Regulations, and as of the Applicable Time, the Company was and is a “well-known seasoned issuer” as defined in Rule 405 of the Rules and Regulations.

The copies of the Initial Registration Statement and any Rule 462(b) Registration Statement and any amendments to any of the foregoing and the copies of each preliminary prospectus, each Issuer Free Writing Prospectus that is required to be filed with the Commission pursuant to Rule 433 and the Prospectus and any amendments or supplements to any of the foregoing, that have been or subsequently are delivered to the Underwriters in connection with the offering of the Securities (whether to meet the request of purchasers pursuant to Rule 173(d) or otherwise) were and will be identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T. For purposes of this Agreement, references to the “delivery” or “furnishing” of any of the foregoing documents to the Underwriters, and any similar terms, include, without limitation, electronic delivery.

The Company has made available a “bona fide electronic road show” (as defined in Rule 433(h)) in compliance with Rule 433(d)(8)(ii) such that no filing with the Commission of any “road show” (as defined in Rule 433(h)) is required in connection with the offering of the Securities.

Each Issuer Free Writing Prospectus (if any), as of its issue date and at all subsequent times through the completion of the public offering and sale of the Securities did not, does not and will not include any information that conflicted, conflicts or will conflict with the information contained in the Registration Statement, any preliminary prospectus or the Prospectus that has not been superseded or modified.

The documents incorporated or deemed to be incorporated by reference in the Registration Statement, any preliminary prospectus and the Prospectus, at the respective times they were or hereafter are filed with the Commission, complied and will comply in all material respects with the requirements of the 1934 Act and the 1934 Act Regulations, as applicable, and did not and 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 statements therein not misleading.

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

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(4) Financial Statements. The financial statements of the Company included or incorporated by reference in the Registration Statement, the General Disclosure Package and the Prospectus, together with the related schedules (if any) and notes, present fairly the financial position of the Company and its consolidated subsidiaries at the dates indicated and the results of operations, changes in stockholders' equity and cash flows of the Company and its consolidated subsidiaries for the periods specified; and all such financial statements have been prepared in conformity with GAAP applied on a consistent basis throughout the periods involved and comply with all applicable accounting requirements under the 1933 Act, the 1933 Act Regulations, the 1934 Act and the 1934 Act Regulations, as applicable. The supporting schedules, if any, included or incorporated by reference in the Registration Statement present fairly, in accordance with GAAP, the information required to be stated therein. The pro forma financial information and the related notes thereto included or incorporated by reference in each of the General Disclosure Package and the Prospectus has been prepared in accordance with the Commission's rules and guidance with respect to pro forma financial information, and the assumptions underlying such pro forma financial information are reasonable and are set forth in each of the General Disclosure Package and the Prospectus.

(5) No Material Adverse Change in Business. Since the respective dates as of which information is given in the Registration Statement, the General Disclosure Package and the Prospectus (in each case exclusive of any amendments or supplements thereto subsequent to the date of this Agreement), (A) there has been no material adverse change in the condition (financial or other), results of operations, business, properties, management or prospects of the Company and its subsidiaries taken as a whole, whether or not arising in the ordinary course of business (in any such case, a "Material Adverse Effect"); (B) except as otherwise disclosed in the General Disclosure Package and the Prospectus (in each case exclusive of any amendments or supplements thereto subsequent to the date of this Agreement), neither the Company nor any of its subsidiaries has incurred any liability or obligation or entered into any transaction or agreement that, individually or in the aggregate, is material with respect to the Company and its subsidiaries, taken as a whole, and neither the Company nor any of its subsidiaries has sustained any loss or interference with its business or operations from fire, explosion, flood, earthquake or other natural disaster or calamity, whether or not covered by insurance, or from any labor dispute or disturbance or court or governmental action, order or decree which would reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect; and (C) there has been no dividend or distribution of any kind declared, paid or made by the Company on any class of its Capital Stock.

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

(7) Good Standing of Subsidiaries. Each subsidiary of the Company has been duly organized and is validly existing as a corporation and is in good standing under the laws of the jurisdiction of its organization, has power and authority to own, lease and operate its properties and to conduct its business as described in the Registration Statement, the General Disclosure Package and the Prospectus and is duly qualified as a foreign corporation to transact business and is in good standing in each jurisdiction in which such qualification is required, whether by reason of the ownership or leasing of

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property or the conduct of business, except where the failure so to qualify or to be in good standing would not, individually or in the aggregate, result in a Material Adverse Effect; except as otherwise disclosed in the Registration Statement, the General Disclosure Package and the Prospectus, all of the issued and outstanding shares of capital stock of each such subsidiary have been duly authorized and validly issued, are fully paid and non-assessable and are owned by the Company, directly or through subsidiaries, free and clear of any Lien; and none of the issued and outstanding shares of capital stock of any such subsidiary was issued in violation of any preemptive rights, rights of first refusal or other similar rights of any securityholder of such subsidiary or, to the knowledge of the Company, any other person. The only subsidiaries of the Company are the subsidiaries listed on Schedule IV hereto and Schedule IV accurately sets forth whether such subsidiaries are corporations, limited or general partnerships or limited liability companies and the jurisdiction of organization of each such subsidiary. Neither of the Company's subsidiaries are a "significant subsidiary" of the Company (as such term is defined in Rule 1-02(w) of Regulation S-X promulgated by the Commission).

(8) Capitalization. The authorized, issued and outstanding Capital Stock of the Company is as set forth in the Prospectus (other than for subsequent issuances, if any, pursuant to employee benefit plans described in the General Disclosure Package or upon the exercise of outstanding options or warrants described in the General Disclosure Package). The shares of issued and outstanding Capital Stock of the Company have been duly authorized and validly issued and are fully paid and non-assessable and were issued in compliance in all material respects with all applicable state and federal securities and "blue-sky" laws; and none of the outstanding shares of Capital Stock of the Company was issued in violation of any preemptive rights, rights of first refusal or other similar rights of any securityholder of the Company or, to the knowledge of the Company, any other person.

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

(10) Authorization of Securities. The Securities to be sold pursuant to this Agreement have been duly authorized for issuance and sale to the Underwriters pursuant to this Agreement and, when issued and delivered by the Company pursuant to this Agreement against payment of the consideration set forth herein, will be validly issued, fully paid and non-assessable. To the knowledge of the Company, no holder of the Securities is or will be subject to personal liability by reason of being such a holder; and the issuance and sale of the Securities pursuant to this Agreement are not subject to any preemptive rights, rights of first refusal or other similar rights of any securityholder of the Company or, to the knowledge of the Company, any other person.

(11) Description of Securities. The Common Stock, the authorized but unissued Preferred Stock, all outstanding warrants and convertible securities and the Company's charter and bylaws conform in all material respects to all of the respective statements relating thereto contained in the Registration Statement, the General Disclosure Package and the Prospectus and such statements conform in all material respects to the rights set forth in the respective instruments and agreements defining the same.

(12) Absence of Defaults and Conflicts. Neither the Company nor any of its subsidiaries is in violation of its Organizational Documents or in default in the performance or observance of any obligation, agreement, covenant or condition contained in any Company Document, except for such defaults that would not, individually or in the aggregate, result in a Material Adverse Effect. The execution, delivery and performance of this Agreement and the consummation of the transactions contemplated herein and in the Registration Statement, the General Disclosure Package and the Prospectus (including the issuance and sale of the Securities and the use of the proceeds from the sale of

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the Securities as described in the General Disclosure Package and the Prospectus under the caption “Use of Proceeds”) and compliance by the Company with its obligations under this Agreement do not and will not, whether with or without the giving of notice or passage of time or both, conflict with or constitute a breach of, or default, Termination Event or Repayment Event under, or result in the creation or imposition of any Lien upon any property or assets of the Company or any of its subsidiaries pursuant to, any Company Documents, except for such conflicts, breaches, defaults or Liens that would not, individually or in the aggregate, result in a Material Adverse Effect, nor will such action result in any violation of (i) the provisions of the Organizational Documents of the Company or any of its subsidiaries or (ii) any applicable law, statute, rule, regulation, judgment, order, writ or decree of any government, government instrumentality or court, domestic or foreign, having jurisdiction over the Company or any of its subsidiaries or any of their respective assets, properties or operations except in the case of clause (ii) only, for any such violation that would not result in a Material Adverse Effect.

(13) Absence of Labor Dispute. No labor dispute with the employees of the Company or any subsidiary of the Company exists or, to the knowledge of the Company, is imminent, and the Company is not aware of any existing or imminent labor disturbance by the employees of any of the principal suppliers, manufacturers, customers or contractors of the Company or any of its subsidiaries which would reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect.

(14) Absence of Proceedings. There is no action, suit, proceeding, inquiry or investigation before or brought by any court or governmental agency or body, domestic or foreign, now pending, or, to the knowledge of the Company, threatened, against or affecting the Company or any of its subsidiaries which is required to be disclosed in the Registration Statement, the Pre-Pricing Prospectus or the Prospectus (other than as disclosed therein) or which would reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect or to materially and adversely affect the consummation of the transactions contemplated in this Agreement or the performance by the Company of its obligations under this Agreement; the aggregate of all pending legal or governmental proceedings to which the Company or any of its subsidiaries is a party or of which any of their respective property or assets is the subject which are not described in the Registration Statement, the Pre-Pricing Prospectus and the Prospectus, including ordinary routine litigation incidental to the business, would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect.

(15) Accuracy of Descriptions and Exhibits. The information in the Pre-Pricing Prospectus and the Prospectus under the captions “Description of Capital Stock—Common Stock” and “Anti-Takeover Effects of Delaware Law and Our Certificate of Incorporation and Bylaws,” the information in the Registration Statement under Item 15, and the information in the Company’s Annual Report on Form 10-K for the fiscal year ended December 31, 2017 under the captions “Business—Governmental Regulation,” “Business—Intellectual Property,” “Notes to Consolidated Financial Statements — 3. Collaboration, License and Purchase Agreements,” “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” in each case to the extent that it constitutes matters of law, summaries of legal matters, summaries of provisions of the Company’s charter or bylaws or any other instruments or agreements, summaries of legal proceedings, or legal conclusions, are accurate and fair summaries of such legal matters, documents, instruments, agreements, proceedings or conclusions, as the case may be; all descriptions in the Registration Statement, the General Disclosure Package and the Prospectus of any other Company Documents are accurate in all material respects; and there are no franchises, contracts, indentures, mortgages, deeds of trust, loan or credit agreements, bonds, notes, debentures, evidences of indebtedness, leases or other instruments, agreements or documents required to be described or referred to in the Registration Statement, the Pre-Pricing Prospectus or the Prospectus or to be filed as exhibits to the Registration Statement which have not been

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so described and filed as required by the 1933 Act, the 1933 Act Regulations, the 1934 Act and the 1934 Act Regulations, as applicable.

(16) Possession of Intellectual Property. The Company and its subsidiaries own and possess or have valid and enforceable licenses to use, all patents, patent rights, patent applications, licenses, copyrights, inventions, know-how (including trade secrets and other unpatented and/or unpatentable proprietary or confidential information, systems or procedures), trade marks, service marks, trade names, service names, software, internet addresses, domain names and other intellectual property (collectively, "Intellectual Property") that is described in the Registration Statement, the General Disclosure Package or the Prospectus or that is necessary for the conduct of their respective businesses as currently conducted, as proposed to be conducted and as described in the Registration Statement, the General Disclosure Package and the Prospectus, except where the failure to own, possess or license such rights would not, individually or in the aggregate, have a Material Adverse Effect; and neither the Company nor any of its subsidiaries has received any notice or is otherwise aware of any infringement of or conflict with rights of others with respect to any Intellectual Property or of any facts or circumstances which would render any Intellectual Property invalid or inadequate to protect the interests of the Company or any of its subsidiaries therein and which infringements or conflicts (if the subject of any unfavorable decision, ruling or finding) or invalidity or inadequacy would, individually or in the aggregate, result in a Material Adverse Effect. Without limitation to the foregoing, except as would not, individually or in the aggregate, result in a Material Adverse Effect, (i) there are no third parties who have or, to the Company's knowledge, will be able to establish rights to any Intellectual Property of the Company or any of its subsidiaries, except for, and to the extent of, the ownership rights of the owners of the Intellectual Property which the Registration Statement, the General Disclosure Package and the Prospectus disclose is licensed to the Company or any of its subsidiaries; (ii) there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others challenging the Company's or any subsidiary's rights in or to any such Intellectual Property, or challenging the validity, enforceability or scope of any such Intellectual Property, or asserting that the Company or any subsidiary infringes or otherwise violates, or would, upon the commercialization of any product or service described in the Registration Statement, the General Disclosure Package or the Prospectus, infringe or violate, any Intellectual Property of others, and the Company is unaware of any facts which could form a reasonable basis for any such action, suit, proceeding or claim; (iii) the Company and its subsidiaries have complied with the terms of each agreement pursuant to which any Intellectual Property has been licensed to the Company or any subsidiary, and all such agreements are in full force and effect; and (iv) there is no patent or patent application that contains claims that interfere with the issued or pending claims of any such Intellectual Property of the Company or any of its subsidiaries or that challenges the validity, enforceability or scope of any such Intellectual Property.

(17) Absence of Further Requirements. (A) No filing with, or authorization, approval, consent, license, order, registration, qualification or decree of, any court or governmental authority or agency, domestic or foreign, (B) no authorization, approval, vote or consent of any holder of Capital Stock or other securities of the Company or creditor of the Company or any of its subsidiaries, (C) no authorization, approval, waiver or consent under any Company Document, and (D) no authorization, approval, vote or consent of any other person or entity, is necessary or required for the execution, delivery or performance by the Company of its obligations under this Agreement, for the offering, issuance, sale or delivery of the Securities hereunder, or for the consummation of any of the other transactions contemplated by this Agreement, in each case on the terms contemplated by the Registration Statement, the General Disclosure Package and the Prospectus, except such as have been obtained under the 1933 Act, the 1933 Act Regulations, the 1934 Act and the 1934 Act Regulations and the rules of the Nasdaq Global Market and FINRA, except for the filing of the Prospectus and any supplements thereto pursuant to Rule 424(b) (which filings shall be made as and when required and without reference to

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Rule 424(b)(8)), any filings required by Rule 433 (which filings shall be made as and when required by Rule 433) and the filing of any Rule 462(b) Registration Statement, and except that no representation is made as to such as may be required under state or foreign securities laws.

(18) Possession of Licenses and Permits. The Company and its subsidiaries possess such permits, licenses, approvals, consents and other authorizations (collectively, “Governmental Licenses”) issued by the appropriate federal, state, local or foreign regulatory agencies or bodies necessary to conduct the business now operated by them, except where the failure to so possess any of the foregoing would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect; the Company and its subsidiaries are in compliance with the terms and conditions of all such Governmental Licenses, except where the failure so to comply would not, individually or in the aggregate, result in a Material Adverse Effect; all of the Governmental Licenses are valid and in full force and effect; and neither the Company nor any of its subsidiaries has received any notice of proceedings relating to the revocation or modification of any such Governmental Licenses which revocation or modification would, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect.

(19) Title to Property. The Company and its subsidiaries have good and marketable title in fee simple to all real property owned by any of them (if any) and good title to all other properties and assets owned by any of them, in each case, free and clear of all Liens except such as (a) are described in the Registration Statement, the General Disclosure Package and the Prospectus or (b) are not, individually or in the aggregate, material to the Company and its subsidiaries taken as a whole, are not required to be disclosed in the Registration Statement, the Pre-Pricing Prospectus or the Prospectus, do not, individually or in the aggregate, materially affect the value of such property and do not materially interfere with the use made and proposed to be made of such property by the Company or any of its subsidiaries; all real property, buildings and other improvements, and all equipment and other property held under lease or sublease by the Company or any of its subsidiaries is held by them under valid, subsisting and enforceable leases or subleases, as the case may be, with, solely in the case of leases or subleases relating to real property, buildings or other improvements, such exceptions as are not material and do not materially interfere with the use made or proposed to be made of such property and buildings or other improvements by the Company and its subsidiaries, and all such leases and subleases are in full force and effect; and neither the Company nor any of its subsidiaries has any notice of any claim of any sort that has been asserted by anyone adverse to the rights of the Company or any of its subsidiaries under any of the leases or subleases mentioned above or affecting or questioning the rights of the Company or any of its subsidiaries to the continued possession of the leased or subleased premises under any such lease or sublease except for such claims which, if successfully asserted against the Company or any of its subsidiaries, would not, individually or in the aggregate, result in a Material Adverse Effect.

(20) Investment Company Act. The Company is not, and upon the issuance and sale of the Securities as herein contemplated and the receipt of the net proceeds therefrom as described in the General Disclosure Package and the Prospectus under the caption “Use Of Proceeds,” will not be, an “investment company” or an entity “controlled” by an “investment company” as such terms are defined in the 1940 Act.

(21) Environmental Laws. Except as described in the Registration Statement, the General Disclosure Package and the Prospectus and except as would not, individually or in the aggregate, result in a Material Adverse Effect, (A) neither the Company nor any of its subsidiaries is in violation of any federal, state, local or foreign statute, law, rule, regulation, ordinance, code, policy or rule of common law or any judicial or administrative interpretation thereof, including any judicial or administrative order, consent, decree or judgment, relating to pollution or protection of human health, the environment

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(including, without limitation, ambient air, surface water, groundwater, land surface or subsurface strata) or wildlife, including, without limitation, laws and regulations relating to the release or threatened release of chemicals, pollutants, contaminants, wastes, toxic substances, hazardous substances, petroleum or petroleum products (collectively, "Hazardous Materials") or to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials (collectively, "Environmental Laws"), (B) the Company and its subsidiaries have all permits, authorizations and approvals required under any applicable Environmental Laws and are each in compliance with their requirements, (C) there are no pending or threatened administrative, regulatory or judicial actions, suits, demands, demand letters, claims, liens, notices of noncompliance or violation, investigation or proceedings relating to any Environmental Law against the Company or any of its subsidiaries and (D) there are no events or circumstances that might reasonably be expected to form the basis of an order for clean-up or remediation, or an action, suit or proceeding by any private party or governmental body or agency, against or affecting the Company or any of its subsidiaries relating to Hazardous Materials or any Environmental Laws.

(22) Absence of Registration Rights: Rights Remaining Under Investors' Rights Agreement. There are no persons with registration rights or other similar rights to have any securities (debt or equity) (A) registered pursuant to the Registration Statement or included in the offering contemplated by this Agreement or (B) otherwise registered by the Company under the 1933 Act, except for rights under the Investors' Rights Agreement (which rights have been duly waived in writing), and there are no persons with co-sale rights, tag-along rights or other similar rights to have any securities (debt or equity) included in the offering contemplated by this Agreement or sold in connection with the sale of Securities. The Company has given all notices required by, and has otherwise complied with its obligations under, or has received written waivers from all relevant parties of any failure on its part to give any such notice or comply with any such obligation, under the Investors' Rights Agreement in connection with the transactions contemplated by this Agreement; and all investor agreements, voting agreements, stockholders agreements, registration rights agreements, co-sale agreements, tag-along agreements and other similar agreements (including, without limitation, the Investors' Rights Agreement) and all rights and obligations under such agreements automatically terminated on the closing date of the Company's initial public offering in 2010, except for registration rights and rights to indemnification or contribution described in the General Disclosure Package and the Prospectus.

(23) Parties to Lock-Up Agreements. Each of the persons listed on Schedule V hereto has executed and delivered to the Representatives a lock-up agreement in the form of Exhibit A hereto. Schedule V hereto contains a true, complete and correct list of all directors and executive officers of the Company and no officers of the Company are subject to Section 16 of the 1934 Act other than the executive officers listed on Schedule V hereto. All stock options that may be issued by the Company at any time during the Lock-Up Period to the directors and executive officers of the Company listed on Schedule V hereto will provide, in each case pursuant to written stock option agreements or similar agreements executed and delivered by the holders of such stock options, that the holders of such stock options will not effect any public sale or distribution (including sales pursuant to Rule 144 under the 1933 Act) of any equity securities of the Company, or any securities convertible into or exchangeable or exercisable for such securities, during the Lock-Up Period; and, during the Lock-Up Period, the Company will not cause or permit any waiver, release, modification or amendment of any such restriction on transfer without the prior written consent of the Representatives.

(24) Nasdaq. The Common Stock is listed on the Nasdaq Global Market.

(25) FINRA Matters. The Company satisfies the eligibility requirements for filing on a shelf registration statement on Form S-3 pursuant to the Commission's standards in place for Form S-3



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prior to October 21, 1992 and therefore qualifies for the exemption from filing with FINRA's Corporate Financing Department under FINRA Rule 5110(b)(7)(C). To the Company's knowledge, it does not have a "conflict of interest" with any member participating in the distribution of the offering as such term is defined and in accordance with the provisions of Conduct Rule 5121 of FINRA. There is a "bona fide public market" for the Common Stock, as such term is defined in FINRA Rule 5121. Except as described in the Registration Statement, the General Disclosure Package or the Prospectus, there are no affiliations among the Company's directors and officers and members of FINRA.

(26) Tax Returns. The Company and its subsidiaries have filed all foreign, federal, state and local tax returns that are required to be filed or have obtained extensions thereof, except where the failure so to file would not, individually or in the aggregate, result in a Material Adverse Effect, and have paid all taxes (including, without limitation, any estimated taxes) required to be paid and any other assessment, fine or penalty, to the extent that any of the foregoing is due and payable, except for any such tax, assessment, fine or penalty that is currently being contested in good faith by appropriate actions and except for such taxes, assessments, fines or penalties the nonpayment of which would not, individually or in the aggregate, result in a Material Adverse Effect.

(27) Insurance. The Company and its subsidiaries are insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as are prudent and customary in the businesses in which they are engaged; all policies of insurance and any fidelity or surety bonds insuring the Company or any of its subsidiaries or their respective businesses, assets, employees, officers and directors are in full force and effect; the Company and its subsidiaries are in compliance with the terms of such policies and instruments in all material respects; there are no claims by the Company or any of its subsidiaries under any such policy or instrument as to which any insurance company is denying liability or defending under a reservation of rights clause; neither the Company nor any such subsidiary has been refused any insurance coverage sought or applied for; and neither the Company nor any such subsidiary has any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers at a cost that would not, individually or in the aggregate, result in a Material Adverse Effect.

(28) Accounting and Disclosure Controls. The Company and its subsidiaries have taken all actions necessary to ensure that, within the time period required by applicable law, the Company will have established and will maintain effective "internal control over financial reporting" (as defined in Rule 13a-15 of the 1934 Act Regulations). The Company and its subsidiaries maintain a system of internal accounting controls sufficient to provide reasonable assurance that (A) transactions are executed in accordance with management's general or specific authorizations; (B) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain asset accountability; (C) access to assets is permitted only in accordance with management's general or specific authorization; and (D) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. Except as described in the Registration Statement, the General Disclosure Package and the Prospectus, since the first day of the Company's earliest fiscal year for which audited financial statements are included or incorporated by reference in the Registration Statement, the General Disclosure Package and the Prospectus, there has been (1) no material weakness (as defined in Rule 1-02 of Regulation S-X of the Commission) in the Company's internal control over financial reporting (whether or not remediated), and (2) no fraud, whether or not material, involving management or other employees who have a role in the Company's internal control over financial reporting and, since the end of the Company's earliest fiscal year for which audited financial statements are included or incorporated by reference in the Registration Statement, the General Disclosure Package 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,

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the Company's internal control over financial reporting. The Company and its subsidiaries have established, maintained and periodically evaluate the effectiveness of "disclosure controls and procedures" (as defined in Rules 13a-15 of the 1934 Act Regulation and 15d-15 under the 1934 Act); such disclosure controls and procedures are designed to ensure that information required to be disclosed by the Company in the reports that it will be required to file or submit under the 1934 Act is recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms, and is accumulated and communicated to the Company's management, including its principal executive officer or officers and principal financial officer or officers, as appropriate, to allow timely decisions regarding disclosure.

The Company's independent public accountants and the audit committee of the Company's board of directors have been advised of all material weaknesses, if any, and significant deficiencies (as defined in Rule 1-02 of Regulation S-X of the Commission), if any, in the Company's internal control over financial reporting and of all fraud, if any, whether or not material, involving management or other employees who have a role in the Company's internal control over financial reporting, in each case that occurred or existed, or was first detected at any time during the three most recent fiscal years covered by the Company's audited financial statements included in the Registration Statement, the General Disclosure Package and the Prospectus or at any time subsequent thereto.

(29) Compliance with the Sarbanes-Oxley Act. There is and has been no failure on the part of the Company or any of the Company's directors or officers, in their capacities as such, to comply with any provision of the Sarbanes-Oxley Act with which any of them is required to comply, including Section 402 of the Sarbanes-Oxley Act related to loans and Sections 302 and 906 related to certifications.

(30) Absence of Manipulation. The Company has not taken and will not take, directly or indirectly, any action designed to or that would constitute or that might reasonably be expected to cause or result in the stabilization or manipulation of the price of any security to facilitate the sale or resale of the Securities.

(31) Statistical, Clinical and Market-Related Data. Any statistical, clinical, medical, therapeutic, demographic or market-related and similar data (including, without limitation, data relating to incidence of various medical conditions or ailments, migraines, migraine sufferers, migraine treatments, pain, pain sufferers, opioid treatments, bipolar disorder, schizophrenia, antipsychotics and similar data) included in the Registration Statement, the General Disclosure Package or the Prospectus are based on or derived from sources that the Company believes to be reliable and accurate and accurately reflect in all material respects the materials upon which such data is based or from which it was derived, and the Company has delivered or made available, copies of such materials to the Representatives which copies are, to its knowledge, true, complete and correct.

(32) Foreign Corrupt Practices Act. Neither the Company nor any of its subsidiaries nor, to the knowledge of the Company, any director, officer, agent, employee, affiliate or other person acting on behalf of the Company or any of its subsidiaries is aware of or has taken any action, directly or indirectly, that has resulted or would result in a violation by any such person of the FCPA, including, without limitation, making use of the mails or any means or instrumentality of interstate commerce corruptly in furtherance of an offer, payment, promise to pay or authorization of the payment of any money, or other property, gift, promise to give, or authorization of the giving of anything of value to any "foreign official" (as such term is defined in the FCPA) or any foreign political party or official thereof or any candidate for foreign political office, in contravention of the FCPA; and the Company and its subsidiaries and, to the knowledge of the Company, its other affiliates have conducted their businesses in

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compliance with the FCPA and have instituted and maintain policies and procedures designed to ensure, and which are reasonably expected to continue to ensure, continued compliance therewith.

(33) Money Laundering Laws. The operations of the Company and its subsidiaries are and have been conducted at all times in compliance with applicable financial recordkeeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the money laundering statutes of all applicable jurisdictions, the rules and regulations thereunder and any related or similar applicable rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, "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 or any of its subsidiaries with respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

(34) OFAC. Neither the Company nor any of its subsidiaries nor, to the knowledge of the Company, any director, officer, agent, employee, affiliate or other person acting on behalf of the Company or any of its subsidiaries is currently subject to any U.S. sanctions administered by OFAC; and the Company will not directly or indirectly use any of the proceeds from the sale of Securities in the offering contemplated by this Agreement, or lend, contribute or otherwise make available any 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.

(35) ERISA Compliance. None of the following events has occurred or exists: (i) a failure to fulfill the obligations, if any, under the minimum funding standards of Section 302 of ERISA with respect to a Plan determined without regard to any waiver of such obligations or extension of any amortization period; (ii) an audit or investigation by the Internal Revenue Service, the U.S. Department of Labor, the Pension Benefit Guaranty Corporation or any other federal, state or foreign governmental or regulatory agency with respect to the employment or compensation of employees by the Company or any of its subsidiaries that would reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect; or (iii) any breach of any contractual obligation, or any violation of law or applicable qualification standards, with respect to the employment or compensation of employees by the Company or any of its subsidiaries that would reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect. None of the following events has occurred or is reasonably likely to occur: (i) a material increase in the aggregate amount of contributions required to be made to all Plans in the current fiscal year of the Company and its subsidiaries compared to the amount of such contributions made in the Company's most recently completed fiscal year; (ii) a material increase in the "accumulated post-retirement benefit obligations" (within the meaning of Statement of Financial Accounting Standards 106) of the Company and its subsidiaries compared to the amount of such obligations in the Company's most recently completed fiscal year; (iii) any event or condition giving rise to a liability under Title IV of ERISA that would reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect; or (iv) the filing of a claim by one or more employees or former employees of the Company or any of its subsidiaries related to its or their employment that would reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect. For purposes of this paragraph and the definition of ERISA, the term "Plan" means a plan (within the meaning of Section 3(3) of ERISA) with respect to which the Company or any of its subsidiaries may have any liability.

(36) Lending and Other Relationship. Except as disclosed in the Registration Statement, the General Disclosure Package and the Prospectus, (i) neither the Company nor any of its subsidiaries has any lending or similar relationship with any Underwriter or any bank or other lending institution affiliated with any Underwriter; (ii) the Company will not use any of the proceeds from the sale of the Securities by the Company hereunder to reduce or retire the balance of any loan or credit

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facility extended by any Underwriter or any of its “affiliates” or “associated persons” (as such terms are used in FINRA Rule 5121) or otherwise direct any such proceeds to any Underwriter or any of its “affiliates” or “associated persons” (as so defined); and (iii) there are and have been no transactions, arrangements or dealings between the Company or any of its subsidiaries, on the one hand, and any Underwriter or any of its “affiliates” or “associated persons” (as so defined), on the other hand, that, under FINRA Rule 5110 or 5121, must be disclosed in a submission to FINRA in connection with this offering or disclosed in the Registration Statement, the General Disclosure Package or Prospectus.

(37) Changes in Management. Except as disclosed in the Registration Statement, the General Disclosure Package and the Prospectus, none of the persons who were officers or directors of the Company as of the date of the Pre-Pricing Prospectus has given oral or written notice to the Company or any of its subsidiaries of his or her resignation (or otherwise indicated to the Company or any of its subsidiaries an intention to resign within the next 24 months), nor has any such officer or director been terminated by the Company or otherwise removed from his or her office or from the board of directors, as the case may be (including, without limitation, any such termination or removal which is to be effective as of a future date) nor is any such termination or removal under consideration by the Company or its board of directors.

(38) Transfer Taxes. There are no stock or other transfer taxes, stamp duties, capital duties or other similar duties, taxes or charges payable in connection with the execution or delivery of this Agreement by the Company or the issuance or sale by the Company of the Securities to be sold by the Company to the Underwriters hereunder.

(39) Related Party Transactions. There are no business relationships or related party transactions involving the Company or any of its subsidiaries or, to the knowledge of the Company, any other person that are required to be described in the General Disclosure Package or the Prospectus that have not been so described as required.

(40) Stop Transfer Instructions. The Company has, with respect to all Common Stock and other Capital Stock and all securities convertible into or exercisable or exchangeable for Common Stock or other Capital Stock (other than the Securities sold pursuant to this Agreement), instructed the transfer agent or other registrar to enter stop transfer instructions and implement stop transfer procedures with respect to such securities owned or to be owned or held or to be held by the directors and officers of the Company listed on Schedule V hereto during the Lock-Up Period; and, during the Lock-Up Period, the Company will not cause or permit any waiver, release, modification or amendment of any such stop transfer instructions or stop transfer procedures without the prior written consent of the Representatives.

(41) Offering Materials. Without limitation to the provisions of Section 16 hereof, the Company has not distributed and will not distribute, directly or indirectly (other than through the Underwriters), any “written communication” (as defined Rule 405 under the 1933 Act) or other offering materials in connection with the offering or sale of the Securities, other than the Pre-Pricing Prospectus, the Prospectus, any amendment or supplements to any of the foregoing that are filed with the SEC and any Permitted Free Writing Prospectuses (as defined in Section 16).

(42) No Restrictions on Dividends. Neither the Company nor any of its subsidiaries is a party to or otherwise bound by any instrument or agreements that limits or prohibits or could limit or prohibit, directly or indirectly, the Company from paying any dividends or making other distributions on its Capital Stock, and no subsidiary of the Company is a party to or otherwise bound by any instrument or agreements that limits or prohibits or could limit or prohibit, directly or indirectly, any subsidiary of the Company from paying any dividends or making other distributions on its capital stock, limited or general

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partnership interests, limited liability company interests, or other equity interests, as the case may be, or from repaying any loans or advances from, or (except for instruments or agreements that by their express terms prohibit the transfer or assignment thereof or of any rights thereunder) transferring any of its properties or assets to, the Company or any other subsidiary, in each case except as described in the Registration Statement, the General Disclosure Package and the Prospectus.

(43) Brokers. There is not a broker, finder or other party that is entitled to receive from the Company any brokerage or finder's fee or other fee or commission as a result of any of the transactions contemplated by this Agreement, except for underwriting discounts and commissions in connection with the sale of the Securities to the Underwriters pursuant to this Agreement.

(44) Regulatory Authorities. Except as described in the Registration Statement, the General Disclosure Package and the Prospectus, the Company and its subsidiaries: (i) are in compliance in all material respects with all statutes, rules, regulations, ordinances, orders and decrees applicable to the ownership, testing, in humans or laboratory models, development, manufacture, formulation, packaging, processing, recordkeeping, use, distribution, marketing, labeling, promotion, sale, price reporting, reimbursement, storage, import, export or disposal of any product manufactured or distributed by or for the Company or any of its subsidiaries ("Applicable Laws"), except where the failure to so comply would not, individually or in the aggregate, result in a Material Adverse Effect; (ii) to the knowledge of Company and its subsidiaries, have not, either voluntarily or involuntarily, disclosed to any governmental authority any violations of Applicable Laws, except such as would not, individually or in the aggregate, result in a Material Adverse Effect; (iii) have not received any Food and Drug Administration ("FDA") Form 483 or any foreign counterpart thereof, warning letter, clinical hold notice or untitled letter from the FDA, any Institutional Review Board (as defined by federal regulation at 21 CFR Section 56.102(g)) or any other governmental authority alleging or asserting noncompliance with any Applicable Laws or any licenses, approvals, clearances, authorizations, permits and supplements or amendments thereto required by any such Applicable Laws ("Authorizations"), except such as would not, individually or in the aggregate, result in a Material Adverse Effect; (iv) have not received notification of nor have reason to believe that any audits by a governmental authority have resulted in a determination that any of their respective products have been improperly reimbursed, except such audits and determinations as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; (v) possess all Authorizations (including, without limitation, exemptions under any Investigational Device Exemption or Investigational New Drug Application, as described at 21 CFR Sections 312 and 812, and approvals of any Institutional Review Board), which are in full force and effect, required for the conduct of their respective businesses (and such Authorizations are valid and in full force and effect) and are not in violation of any term of any such Authorizations, except where the failure to possess such Authorization or the violation of such Authorization would not, individually or in the aggregate, result in a Material Adverse Effect; (vi) have not received written notice of any pending or threatened claim, suit, proceeding, clinical hold, hearing, enforcement, audit, investigation, arbitration, suspension, debarment or exclusion from any governmental authority or Institutional Review Board alleging that any of their respective operations or activities is in violation of any Applicable Laws or Authorizations and the Company has no knowledge or reason to believe that any such governmental authority, Institutional Review Board or other non-governmental authority is considering any such claim, suit, proceeding, clinical hold, hearing, enforcement, audit, investigation, arbitration, suspension, debarment or exclusion except for any such claims, suits, proceedings, clinical holds, hearings, enforcements, audits, investigations, arbitrations, suspensions, debarments or exclusions that would not, individually or in the aggregate, result in a Material Adverse Effect; (vii) have not received written notice that any governmental authority or Institutional Review Board has taken, is taking or intends to take action to limit, suspend, modify or revoke any Authorizations and the Company has no knowledge or reason to believe that any such governmental authority is considering such action, except for any such

actions that would not, individually or in the aggregate, result in a Material Adverse Effect; (viii) have, or have had on their behalf, filed, declared, obtained, maintained or submitted all reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as are required by any Applicable Laws or Authorizations, except where the failure to so file, declare, obtain, maintain or submit would not, individually or in the aggregate, result in a Material Adverse Effect and all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were materially complete and correct on the date filed (or were corrected or supplemented by a subsequent submission); and (ix) have not, either voluntarily or involuntarily, initiated, conducted or issued, or caused to be initiated, conducted or issued, any recall, market withdrawal or replacement, safety alert, warning, "dear doctor" letter or investigator notice relating to an alleged lack of safety or efficacy of any product or product candidate, any alleged product defect, or violation of any material Applicable Laws or Authorizations and the Company is not aware of any facts that would cause the Company or any of its subsidiaries to initiate any such notice or action and the Company has no knowledge or reason to believe that any governmental authority, Institutional Review Board or other non-governmental authority intends to initiate any such notice or action, except for any such notices or actions that would not, individually or in the aggregate, result in a Material Adverse Effect. Any clinical trials conducted by or on behalf of the Company or any of its subsidiaries that are described in the Registration Statement, the General Disclosure Package or the Prospectus were and, if still pending, are being conducted in compliance in all material respects with experimental protocols, procedures and controls pursuant to accepted professional scientific standards and all applicable federal, state, local and foreign laws, rules and regulations, including, but not limited to, the Federal Food, Drug, and Cosmetic Act and implementing regulations at 21 C.F.R. Parts 50, 54, 56, 58 and 312. Any descriptions of studies, tests and preclinical and clinical trials, including any related results and regulatory status, contained in the Registration Statement, the General Disclosure Package or the Prospectus are, and will be, accurate and complete in all material respects. The Company is not aware of any studies, tests or trials the results of which reasonably call into question in any material respect the clinical trial results described or referred to in the Registration Statement, the General Disclosure Package or the Prospectus. Neither the Company nor any of its subsidiaries has received any written notices or other correspondence from the FDA, an Institutional Review Board or other governmental agency requiring or recommending the termination, suspension or material modification of any clinical trials conducted by, or on behalf of, the Company or any of its subsidiaries or in which the Company or any of its subsidiaries has participated.

(45) Compliance with Health Care Laws. Without limiting the generality of subsection 1(a)(45) above, neither the Company nor any of its subsidiaries, nor any of their respective employees, officers, directors and agents, nor any of their respective business operations, is in violation of any applicable Health Care Laws, except where the failure to be in compliance would not, individually or in the aggregate, result in a Material Adverse Effect. For purposes of this Agreement, "Health Care Laws" means: (i) the Federal Food, Drug, and Cosmetic Act and the regulations promulgated thereunder, including the U.S. Prescription Drug Marketing Act of 1987, as amended, and the regulations promulgated thereunder; (ii) all federal, state, local and all foreign health care related fraud and abuse laws, including, without limitation, the U.S. Anti-Kickback Statute (42 U.S.C. Section 1320a-7b(b)), the U.S. Civil False Claims Act (31 U.S.C. Section 3729 et seq.), Sections 1320a-7 and 1320a-7a of Title 42 of the United States Code and the regulations promulgated pursuant to such statutes; (iii) any criminal laws relating to health care fraud and abuse, including but not limited to 18 U.S.C. Sections 286 and 287, and the health care fraud criminal provisions under the U.S. Health Insurance Portability and Accountability Act of 1996 ("HIPAA"); (iv) the Standards for Privacy of Individually Identifiable Health Information, the Security Standards, the Standards for Electronic Transactions and Code Sets promulgated under HIPAA (42 U.S.C. Section 1320d et seq.), the Health Information Technology for Economic and Clinical Health Act (42 U.S.C. Section 17921 et seq.), and the regulations promulgated thereunder and any state or non-U.S. counterpart thereof or other law or regulation the purpose of which

is to protect the privacy of individuals or prescribers; (iv) the U.S. Controlled Substances Act; (v) any laws or regulations that govern participation in or coverage or reimbursement from any U.S. or state health care program, including but not limited to the federal TRICARE statute (10 U.S.C. §1071 et seq.), the Veterans Administration drug pricing program (38 U.S.C. Section 8126), and any regulations promulgated thereunder; (vi) quality, safety and accreditation standards and requirements of any applicable federal, state, local or foreign laws or regulatory bodies; and (vii) any and all other applicable health care laws and regulations in any jurisdiction, as well as contractual agreements mandated by such laws. Additionally, neither the Company nor any of its subsidiaries, nor any of their respective employees, officers, directors, agents or contractors has been excluded, suspended or debarred from participation in any federal health care program or, to the knowledge of Company and its subsidiaries, is subject to an inquiry, investigation, proceeding, or other similar matter that could subject the Company, any of its subsidiaries, or any of their respective employees, officers, directors, agents or contractors to exclusion, suspension or debarment.

(b) *Certificates*. Any certificate signed by any officer of the Company or any of its subsidiaries (whether signed on behalf of such officer, the Company or such subsidiary) and delivered to the Representatives or to counsel for the Underwriters shall be deemed a representation and warranty by the Company to each Underwriter as to the matters covered thereby.

## SECTION 2. Sale and Delivery to Underwriters; Closing.

(a) *Initial Securities*. On the basis of the representations and warranties herein contained and subject to the terms and conditions herein set forth, the Company agrees to sell to the Underwriters, severally and not jointly, the Initial Securities, and each Underwriter, severally and not jointly, agrees to purchase the respective number of Initial Securities set forth opposite its name in Schedule I hereto plus any additional number of Initial Securities which such Underwriter may become obligated to purchase pursuant to the provisions of Section 10 hereof, subject to such adjustments among the Underwriters as the Representatives in their sole discretion shall make to eliminate any sales or purchases of fractional Securities, in each case at a price of \$48.88 per share (the "Purchase Price").

(b) *Option Securities*. In addition, on the basis of the representations and warranties herein contained and subject to the terms and conditions herein set forth, the Company grants an option to the Underwriters, severally and not jointly, to purchase up to 900,000 Option Securities at the Purchase Price; provided that the price per share for any Option Securities shall be reduced by an amount equal to any dividends or distributions declared, paid or payable by the Company on the Initial Securities but not payable on such Option Securities. The option hereby granted will expire at 11:59 P.M. (New York City time) on the 30th day after the date hereof and may be exercised in whole or in part from time to time upon notice by the Representatives to the Company setting forth the number of Option Securities as to which the several Underwriters are then exercising the option and the time and date of payment and delivery for such Option Securities. Any such time and date of delivery (an "Option Closing Date") shall be determined by the Representatives, but shall not be later than seven full business days after the exercise of said option (unless postponed in accordance with the provisions of Section 10), nor in any event prior to the Closing Date. If the option is exercised as to all or any portion of the Option Securities, the Company will sell to the Underwriters the number of Option Securities then being purchased, and each of the Underwriters, acting severally and not jointly, will purchase that proportion of the total number of Option Securities then being purchased which the number of Initial Securities set forth in Schedule I opposite the name of such Underwriter, plus any additional number of Initial Securities which such Underwriter may become obligated to purchase pursuant to the provisions of Section 10 hereof, bears to the total number of Initial Securities, subject in each case to such adjustments as the Representatives in their discretion shall make to eliminate any sales or purchases of fractional shares.

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(c) *Payment.* Payment of the purchase price for, and delivery of, the Initial Securities shall be made at the offices of Goodwin Procter LLP, The New York Times Building, 620 Eighth Avenue, New York, New York 10018, or at such other place as shall be agreed upon by the Representatives and the Company, at 10:00 A.M. (New York City time) on August 10, 2018 (unless postponed in accordance with the provisions of Section 10), or such other time not later than five business days after such date as shall be agreed upon by the Representatives and the Company (such time and date of payment and delivery being herein called "Closing Date").

In addition, in the event that any or all of the Option Securities are purchased by the Underwriters, payment of the purchase price for, and delivery of, such Option Securities shall be made at 10:00 A.M. (New York City time) at the above-mentioned offices, or at such other place as shall be agreed upon by the Representatives and the Company, on each Option Closing Date as specified in the notice from the Representatives to the Company.

Payment shall be made to the Company by wire transfer of immediately available funds to a single bank account designated by the Company, in each case against delivery to the Representatives for the respective accounts of the Underwriters of the Securities to be purchased by them. It is understood that each Underwriter has authorized the Representatives, for its account, to accept delivery of, receipt for, and make payment of the purchase price for, the Initial Securities and the Option Securities, if any, which it has agreed to purchase.

(d) *Delivery of Securities.* Delivery of the Securities shall be made through the facilities of DTC unless the Representatives shall otherwise instruct.

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

(a) *Compliance with Securities Regulations and Commission Requests.* The Company, subject to Section 3(b), will comply with the requirements of Rule 430B and Rule 433 and will notify the Representatives immediately, and confirm the notice in writing, (i) when the Initial Registration Statement, any Rule 462(b) Registration Statement or any post-effective amendment to the Registration Statement shall be declared or become effective, or when any preliminary prospectus, the Prospectus or any Issuer Free Writing Prospectus or any amendment or supplement to any of the foregoing shall have been filed, (ii) of the receipt of any comments from the Commission, including, without limitation, comments on any documents filed by the Company pursuant to the 1934 Act (and shall promptly furnish the Representatives with a copy of any comment letters and any transcript or written summary of oral comments, and shall furnish the Representatives with copies of any written responses thereto a reasonable amount of time prior to the proposed filing thereof with the Commission and will not file any such response to which the Representatives or counsel for the Underwriters shall object), (iii) of any request by the Commission for any amendment to the Registration Statement or any amendment or supplement to any preliminary prospectus or the Prospectus, any document incorporated or deemed to be incorporated by reference therein or any Issuer Free Writing Prospectus or for additional information, (iv) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or of any order preventing or suspending the use of any preliminary prospectus, the Prospectus or any Issuer Free Writing Prospectus or any amendment or supplement to any of the foregoing, or of the suspension of the qualification of the Securities for offering or sale in any jurisdiction or of the loss or suspension of any exemption from any such qualification, or of the initiation or threatening of any proceedings for any of such purposes, or of any examination pursuant to Section 8(e) of the 1933 Act concerning the Registration Statement and (v) if the Company becomes the subject of a proceeding under Section 8A of the 1933 Act in connection with the offering of the Securities. The Company will make



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every reasonable effort to prevent the issuance of any stop order and the suspension or loss of any qualification of the Securities for offering or sale and any loss or suspension of any exemption from any such qualification, and if any such stop order is issued, or any such suspension or loss occurs, to obtain the lifting thereof at the earliest possible moment.

(b) *Filing of Amendments.* The Company will give the Representatives notice of its intention to file or prepare any amendment to the Registration Statement, any Rule 462(b) Registration Statement or any amendment, supplement or revision to any preliminary prospectus, the Prospectus or any Issuer Free Writing Prospectus, whether pursuant to the 1933 Act or otherwise, and the Company will furnish the Representatives with copies of any such documents within a reasonable amount of time prior to such proposed filing or use, as the case may be, and will not file or use any such document to which the Representatives or counsel for the Underwriters shall object. The Company has given the Representatives notice of any filings made pursuant to the 1934 Act or the 1934 Act Regulations within 48 hours prior to the Applicable Time. The Company will give the Representatives notice of its intention to make any filing pursuant to the 1934 Act or the 1934 Act Regulations from the Applicable Time through the Closing Date (or, if later, through the end of the period during which the Prospectus is required (or, but for the provisions of Rule 172, would be required) to be delivered by applicable law (whether to meet the requests of purchasers pursuant to Rule 173(d) or otherwise)) and will furnish the Representatives with copies of any such documents a reasonable amount of time prior to such proposed filing, as the case may be, and will not file or use any such document to which the Representatives or counsel for the Underwriters shall object.

(c) *Delivery of Registration Statements.* The Company has furnished or will deliver to the Representatives and counsel for the Underwriters, without charge, copies of the Initial Registration Statement and any Rule 462(b) Registration Statement and of each amendment thereto (including exhibits filed therewith or incorporated by reference therein and documents incorporated or deemed to be incorporated by reference therein or otherwise deemed to be a part thereof) and copies of all consents and certificates of experts. The copies of the Registration Statement and each amendment thereto furnished to the Underwriters will be identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T.

(d) *Delivery of Prospectuses.* The Company has delivered to each Underwriter, without charge, as many copies of each preliminary prospectus and any amendments or supplements thereto as such Underwriter reasonably requested, and the Company hereby consents to the use of such copies for purposes permitted by the 1933 Act. The Company will furnish to each Underwriter, without charge, during the period when the Prospectus is required (or, but for the provisions of Rule 172, would be required) to be delivered by applicable law (whether to meet the request of purchasers pursuant to Rule 173(d) or otherwise), such number of copies of the Pre-Pricing Prospectus, the Prospectus and any Issuer Free Writing Prospectus and any amendments or supplements to any of the foregoing as such Underwriter may reasonably request. Each preliminary prospectus, the Prospectus, Issuer Free Writing Prospectus and any amendments or supplements to any of the foregoing furnished to the Underwriters were and will be identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T.

(e) *Continued Compliance with Securities Laws.* The Company will comply with the 1933 Act, the 1933 Act Regulations, the 1934 Act and the 1934 Act Regulations so as to permit the completion of the distribution of the Securities as contemplated in this Agreement and in the General Disclosure Package and the Prospectus. If at any time when a prospectus is required (or, but for the provisions of Rule 172, would be required) by the applicable law to be delivered in connection with sales of the Securities (whether to meet the request of purchasers pursuant to Rule 173(d) or otherwise), any event

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shall occur or condition shall exist as a result of which it is necessary (or if the Representatives or counsel for the Underwriters shall notify the Company that, in their judgment, it is necessary) to amend the Registration Statement or amend or supplement the General Disclosure Package or the Prospectus so that the Registration Statement, the General Disclosure Package or the Prospectus, as the case may be, will not include any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made or then prevailing, not misleading or if it is necessary (or, if the Representatives or counsel for the Underwriters shall notify the Company that, in their judgment, it is necessary) to amend the Registration Statement or amend or supplement the General Disclosure Package or the Prospectus in order to comply with the requirements of the 1933 Act, the 1933 Act Regulations, the 1934 Act or the 1934 Act Regulations, the Company will promptly notify the Representatives of such event or condition and of its intention to file such amendment or supplement (or, if the Representatives or counsel for the Underwriters shall have notified the Company as aforesaid, the Company will promptly notify the Representatives of its intention to prepare such amendment or supplement) and will promptly prepare and file with the Commission, subject to Section 3(b) hereof, such amendment or supplement as may be necessary to correct such untrue statement or omission or to comply with such requirements, and, in the case of an amendment or post-effective amendment to the Registration Statement, the Company will use its best efforts to have such amendment declared or become effective as soon as practicable, and the Company will furnish to the Underwriters such number of copies of such amendment or supplement as the Underwriters may reasonably request. If at any time an Issuer Free Writing Prospectus conflicts with the information contained in the Registration Statement or if an event shall occur or condition shall exist as a result of which it is necessary (or if the Representatives or counsel for the Underwriters shall notify the Company that, in their judgment, it is necessary) to amend or supplement such Issuer Free Writing Prospectus so that it will not include an 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 or then prevailing, not misleading, or if it is necessary (or, if the Representatives or counsel for the Underwriters shall notify the Company that, in their judgment, it is necessary) to amend or supplement such Issuer Free Writing Prospectus in order to comply with the requirements of the 1933 Act or the 1933 Act Regulations, the Company will promptly notify the Representatives of such event or condition and of its intention to file such amendment or supplement (or, if the Representatives or counsel for the Underwriters shall have notified the Company as aforesaid, the Company will promptly notify the Representatives of its intention to prepare such amendment or supplement) and will promptly prepare and, if required by the 1933 Act or the 1933 Act Regulations, file with the Commission, subject to Section 3(b) hereof, such amendment or supplement as may be necessary to eliminate or correct such conflict, untrue statement or omission or to comply with such requirements, and, in the case of an amendment or post-effective amendment to the Registration Statement, and the Company will furnish to the Underwriters such number of copies of such amendment or supplement as the Underwriters may reasonably request.

(f) *Blue Sky and Other Qualifications.* The Company will use its reasonable best efforts, in cooperation with the Underwriters, to qualify the Securities for offering and sale, or to obtain an exemption for the Securities to be offered and sold, under the applicable securities laws of such states and other jurisdictions (domestic or foreign) as the Representatives may designate and to maintain such qualifications and exemptions in effect for so long as required for the distribution of the Securities (but in no event for a period of not less than one year from the date of this Agreement); provided, however, that the Company shall not be obligated to file any general consent to service of process or to qualify as a foreign corporation or as a dealer in securities in any jurisdiction in which it is not so qualified or to subject itself to taxation in respect of doing business in any jurisdiction in which it is not otherwise so subject. In each jurisdiction in which the Securities have been so qualified or exempt, the Company will file such statements and reports as may be required by the laws of such jurisdiction to continue such

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qualification or exemption, as the case may be, in effect for so long as required for the distribution of the Securities (but in no event for a period of not less than one year from the date of this Agreement).

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

(h) *Use of Proceeds*. The Company will use the net proceeds received by it from the sale of the Securities in the manner specified in the General Disclosure Package and the Prospectus under "Use of Proceeds."

(i) *Listing*. The Company will use its best efforts to effect and maintain the listing of the Securities on the Nasdaq Global Market as and when required by this Agreement.

(j) *Restriction on Sale of Securities*. During the Lock-Up Period, the Company will not, without the prior written consent of the Representatives, directly or indirectly:

(i) issue, offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of any shares of Common Stock or other Capital Stock or any securities convertible into or exercisable or exchangeable for Common Stock or other Capital Stock,

(ii) file or cause the filing of any registration statement under the 1933 Act with respect to any Common Stock or other Capital Stock or any securities convertible into or exercisable or exchangeable for any Common Stock or other Capital Stock (other than any Rule 462(b) Registration Statement filed to register Securities to be sold to the Underwriters pursuant to this Agreement and other than registration statements on Form S-8 filed with the Commission after the Closing Date); or

(iii) enter into any swap or other agreement, arrangement, hedge or transaction that transfers to another, in whole or in part, directly or indirectly, any of the economic consequences of ownership of any Common Stock or other Capital Stock or any securities convertible into or exercisable or exchangeable for any Common Stock or other Capital Stock,

whether any transaction described in clause (i) or (iii) above is to be settled by delivery of Common Stock, other Capital Stock, other securities, in cash or otherwise, or publicly announce any intention to do any of the foregoing.

Notwithstanding the provisions set forth in the immediately preceding paragraph, the Company may, without the prior written consent of the Representatives:

(1) issue Securities to the Underwriters pursuant to this Agreement,

(2) issue shares, and options to purchase shares, of Common Stock pursuant to equity incentive plans, employee stock option plans and employee stock purchase plans described in the General Disclosure Package and the Prospectus, as those plans are in effect on the date of this Agreement;

(3) issue shares of Common Stock (A) upon the exercise of stock options issued under equity incentive plans referred to in clause (2) above, as those plans are in effect on the date of this Agreement, or (B) upon the exercise of warrants outstanding on the date of this Agreement and described

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in the General Disclosure Package and the Prospectus, as those warrants are in effect on the date of this Agreement; and

(4) issue shares of Common Stock to one or more counterparties in connection with the consummation of a bona fide strategic partnership, joint venture, collaboration, merger, co-promotion or distribution arrangement, or the acquisition or in-licensing of any business products or technologies; provided that the aggregate number of shares of Common Stock issued under this subsection (4) shall not exceed 20% of the number of Initial Securities;

provided, however, that in the case of any issuance described in clause (4) above, it shall be a condition to the issuance that each recipient executes and delivers to the Representatives, acting on behalf of the Underwriters, not later than one business day prior to the date of such issuance, a written agreement, in substantially the form of Exhibit A to this Agreement and otherwise satisfactory in form and substance to the Representatives.

(k) *Reporting Requirements.* The Company, during the period when the Prospectus is required (or, but for the provisions of Rule 172, would be required) by applicable law to be delivered (whether to meet the request of purchasers pursuant to Rule 173(d) or otherwise), will file all documents required to be filed with the Commission pursuant to the 1934 Act and the 1934 Act Regulations within the time periods required by the 1934 Act and the 1934 Act Regulations.

(l) *Preparation of Prospectus.* Immediately following the execution of this Agreement, the Company will, subject to Section 3(b) hereof, prepare the Prospectus, which shall contain the selling terms of the Securities, the plan of distribution thereof and such other information as may be required by the 1933 Act or the 1933 Act Regulations or as the Representatives and the Company may deem appropriate, and, if requested by the Representatives, will prepare an Issuer Free Writing Prospectus containing the information set forth in Schedule II hereto and such other information as may be required by Rule 433 or as the Representatives and the Company may deem appropriate, and will file or transmit for filing with the Commission, the Prospectus in accordance with the provisions of Rule 430B and in the manner and within the time period required by Rule 424(b) (without reliance on Rule 424(b)(8)) and, if applicable, Rule 433(d), the Prospectus and any such Issuer Free Writing Prospectus.

(m) *New Registration Statement.* If, immediately prior to the third anniversary of the initial effective date of the Registration Statement (the "Renewal Deadline"), any of the Securities remains unsold by the Underwriters, the Company will, prior to the Renewal Deadline, if it has not already done so, file a new registration statement relating to the Securities, and notify the Representatives when such filing has been made and use its best efforts to cause such registration statement to be declared effective within 180 days after the Renewal Deadline. The Company will furnish the Representatives with copies of any such new registration statement a reasonable amount of time prior to such proposed filing and, notwithstanding the foregoing provisions of this paragraph, will not file any such proposed registration statement to which the Representatives or counsel for the Underwriters shall object. In any such case, the Company will take all other action as is necessary or appropriate to permit the public offering and sale of the Securities to continue from and after the Renewal Deadline as contemplated in the expired registration statement relating to the Securities. References in this Agreement to the "Registration Statement" shall include any such new shelf registration statement from and after the time it is filed with the Commission, *mutatis mutandis*.

(n) *Payment of Fees.* The Company shall pay the required Commission filing fees relating to the Securities within the time required by Rule 456(b)(1) of the Rules and Regulations without regard to

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the proviso therein and otherwise in accordance with Rules 456(b) and 457(r) of the Rules and Regulations.

**SECTION 4. Payment of Expenses.**

(a) *Expenses.* The Company will pay all expenses incident to the performance of its obligations under this Agreement, including (i) the preparation, printing and filing of the Registration Statement and each amendment thereto (in each case including exhibits) and any costs associated with electronic delivery of any of the foregoing, (ii) the word processing and delivery to the Underwriters of this Agreement and such other documents as may be required in connection with the offering, purchase, sale, issuance or delivery of the Securities, (iii) the preparation, issuance and delivery of the certificates for the Securities and the issuance and delivery of the Securities to the Underwriters, including any stock or other transfer taxes and any stamp or other taxes or duties payable in connection with the sale, issuance or delivery of the Securities to the Underwriters, (iv) the fees and disbursements of the counsel, accountants and other advisors to the Company, (v) the qualification or exemption of the Securities under securities laws in accordance with the provisions of Section 3(f) hereof, including filing fees and the reasonable fees and disbursements of counsel for the Underwriters in connection therewith and in connection with the preparation of the Blue Sky Survey and any supplements thereto and the reasonable fees and disbursements of special Canadian counsel for the Underwriters in connection with the preparation of a Canadian “wrapper”, if any, (vi) the preparation, printing and delivery to the Underwriters of copies of each preliminary prospectus, any Permitted Free Writing Prospectus and the Prospectus and any amendments or supplements to any of the foregoing and any costs associated with electronic delivery of any of the foregoing, (vii) the preparation, printing and delivery to the Underwriters of copies of the Blue Sky Survey and any Canadian “wrapper” and any supplements thereto and any costs associated with electronic delivery of any of the foregoing, (viii) the fees and expenses of the transfer agent and registrar for the Securities, (ix) the filing fees incident to, and the reasonable fees and disbursements of counsel to the Underwriters in connection with, the review, if any, by FINRA of the terms of the sale of the Securities, (x) the fees and expenses incurred in connection with the listing of the Securities on the Nasdaq Global Market, (xi) the costs and expenses of the Company and any of its officers, directors, counsel or other representatives in connection with presentations or meetings undertaken in connection with the offering of the Securities, including, without limitation, expenses associated with the production of road show slides and graphics and the production and hosting of any electronic road shows, fees and expenses of any consultants engaged in connection with road show presentations, travel, lodging, transportation, and other expenses of the officers, directors, counsel and other representatives of the Company incurred, and one-half of the cost of any aircraft chartered, in connection with any such presentations or meetings, and (xii) the reasonable fees and disbursements of counsel for the Underwriters in connection with the copying and delivery of closing documents and other documents relating to the offering contemplated hereby (and in connection with the preparation and delivery of any electronic versions or compilations of such documents) to the Company, the Company’s accountants and counsel and the Underwriters.

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

**SECTION 5. Conditions of Underwriters’ Obligations.** The obligations of the several Underwriters hereunder are subject to the accuracy of the representations and warranties of the Company contained in this Agreement, or in certificates signed by any officer of the Company or any subsidiary of the Company (whether signed on behalf of such officer, the Company or such subsidiary) delivered

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pursuant to the provisions hereof to the Representatives or counsel for the Underwriters, to the performance by the Company of its covenants and other obligations hereunder, and to the following further conditions:

(a) *Effectiveness of Registration Statement.* The Initial Registration Statement and any post-effective amendments thereto and any Rule 462(b) Registration Statement shall have become effective, and no stop order suspending the effectiveness of the Initial Registration Statement or any Rule 462(b) Registration Statement shall have been issued under the 1933 Act or proceedings therefor initiated or, to the knowledge of the Company, threatened by the Commission, no notice of objection of the Commission to the use of the Initial Registration Statement or any post-effective amendment thereto pursuant to Rule 401(g)(2) of the Rules and Regulations shall have been received, and any request on the part of the Commission for additional information shall have been complied with to the reasonable satisfaction of the Representatives. The Prospectus shall have been filed with the Commission in the manner and within the time period required by Rule 424(b) (without reliance upon Rule 424(b)(8)) and each Issuer Free Writing Prospectus required to be filed with the Commission shall have been filed in the manner and within the time period required by Rule 433, and, prior to Closing Date, the Company shall have provided evidence satisfactory to the Representatives of such timely filings.

(b) *Opinion of Counsel for Company.* At Closing Date, the Representatives shall have received (1) the favorable opinion, dated as of Closing Date, of Latham & Watkins LLP, counsel for the Company ("Company Counsel"), in form and substance satisfactory to the Representatives, together with signed or reproduced copies of such opinion for each of the other Underwriters and (2) the favorable opinion, dated as of the Closing Date, of Bozicevic Field & Francis LLP, special intellectual property counsel to the Company, in form and substance satisfactory to the Representatives, together with signed or reproduced copies of such opinions for each of the other Underwriters.

(c) *Opinion of Counsel for Underwriters.* At the Closing Date, the Representatives shall have received the favorable letter, dated as of Closing Date, of Goodwin Procter LLP, counsel for the Underwriters, together with signed or reproduced copies of such letter for each of the other Underwriters, with respect to the Securities to be sold by the Company pursuant to this Agreement, this Agreement, the Initial Registration Statement, any Rule 462(b) Registration Statement, the General Disclosure Packages and the Prospectus and any amendments or supplements thereto and such other matters as the Representatives may reasonably request.

(d) *Officers' Certificate.* At the Closing Date or the applicable Option Closing Date, as the case may be, there shall not have been, since the date hereof or since the respective dates as of which information is given in the Registration Statement, the General Disclosure Package and the Prospectus (in each case exclusive of any amendments or supplements thereto subsequent to the date of this Agreement), any material adverse change in the condition (financial or other), results of operations, business, properties, management or prospects of the Company and its subsidiaries taken as a whole, whether or not arising in the ordinary course of business, and, at the Closing Date, the Representatives shall have received a certificate, signed on behalf of the Company by the President or the Chief Executive Officer of the Company and the Chief Financial Officer or Chief Accounting Officer of the Company, dated as of Closing Date, to the effect that (i) there has been no such material adverse change, (ii) the representations and warranties of the Company in this Agreement are true and correct at and as of the Closing Date with the same force and effect as though expressly made at and as of Closing Date, (iii) the Company has complied with all agreements and satisfied all conditions on its part to be performed or satisfied at or prior to Closing Date under or pursuant to this Agreement, and (iv) no stop order suspending the effectiveness of the Registration Statement has been issued and no proceedings for that purpose have been instituted or are pending or, to the knowledge of the Company, are contemplated by the Commission.

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(e) *Accountant's Comfort Letter.* At the time of the execution of this Agreement, the Representatives shall have received from Ernst & Young LLP a letter, dated the date of this Agreement and in form and substance satisfactory to the Representatives, together with signed or reproduced copies of such letter for each of the other Underwriters, containing statements and information of the type ordinarily included in accountants' "comfort letters" to underwriters with respect to the financial statements and certain financial information of the Company contained or incorporated by reference in the Registration Statement, the Pre-Pricing Prospectus and the Prospectus and any amendments or supplements to any of the foregoing.

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

(g) *Approval of Listing.* At Closing Date and each Option Closing Date, if any, the Securities to be purchased by the Underwriters from the Company at such time shall have been approved for listing on the Nasdaq Global Market, subject only to official notice of issuance.

(h) *Lock-up Agreements.* Prior to the date of this Agreement, the Representatives shall have received an agreement substantially in the form of Exhibit A hereto signed by each of the persons listed in Schedule V hereto.

(i) *No Objection.* Prior to the date of this Agreement, FINRA shall have raised no objection with respect to the fairness and reasonableness of the underwriting terms and arrangements.

(j) *Secretary's Certificate.* At the Closing Date, the Representatives shall have received a certificate, signed on behalf of the Company by the Secretary of the Company, dated as of Closing Date, in form and substance satisfactory to the Representatives.

(k) *Conditions to Purchase of Option Securities.* In the event that the Underwriters exercise their option provided in Section 2(b) hereof to purchase all or any portion of the Option Securities on any Option Closing Date that is after the Closing Date, the obligations of the several Underwriters to purchase the applicable Option Securities shall be subject to the conditions specified in the introductory paragraph of this Section 5 and to the further condition that, at the applicable Option Closing Date, the Representatives shall have received:

(1) Opinion of Counsel for Company. The favorable opinion of Company Counsel and of each other counsel named in Section 5(b), each in form and substance satisfactory to the Representatives and dated such Option Closing Date, relating to the Option Securities to be purchased on such Option Closing Date and otherwise to the same effect as the respective opinions required by Section 5(b) hereof.

(2) Opinion of Counsel for Underwriters. The favorable letter of Goodwin Procter LLP, counsel for the Underwriters, in form and substance satisfactory to the Representatives and dated such Option Closing Date, relating to the Option Securities to be purchased on such Option Closing Date and otherwise to the same effect as the opinion required by Section 5(c) hereof.

(3) Officers' Certificate. A certificate, dated such Option Closing Date, to the effect set forth in, and signed on behalf of the Company by the officers specified in, Section 5(d) hereof, except

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that the references in such certificate to the Closing Date shall be changed to refer to such Option Closing Date.

(4) Bring-down Comfort Letter. A letter from Ernst & Young LLP in form and substance satisfactory to the Representatives and dated such Option Closing Date, substantially in the same form and substance as the letter furnished to the Representatives pursuant to Section 5(f) hereof, except that the “specified date” in the letter furnished pursuant to this paragraph shall be a date not more than three business days prior to such Option Closing Date, and except that such letter shall also cover any amendments or supplements to the Registration Statement, the Pre-Pricing Prospectus and the Prospectus subsequent to the Closing Date.

(5) Secretary’s Certificate. A certificate, dated such Option Closing Date, to the effect set forth in Section 5(j) hereof, and signed on behalf of the Company by the Secretary of the Company, except that the references in such certificate to the Closing Date shall be changed to refer to such Option Closing Date.

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

(m) Termination of Agreement. If any condition specified in this Section 5 shall not have been fulfilled when and as required to be fulfilled, this Agreement, or, in the case of any condition to the purchase of Option Securities on an Option Closing Date which is after the Closing Date, the obligations of the several Underwriters to purchase the relevant Option Securities on such Option Closing Date, may be terminated by the Representatives by notice to the Company at any time on or prior to Closing Date or such Option Closing Date, as the case may be, and such termination shall be without liability of any party to any other party except as provided in Section 4 hereof and except that, Sections 1, 6, 7, 8, 11, 12, 13, 14, 15, 17, 18 and 19 hereof shall survive any such termination of this Agreement and remain in full force and effect.

#### SECTION 6. Indemnification.

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

(i) against any and all loss, liability, claim, damage and expense whatsoever, as incurred, arising out of any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement (or any amendment thereto), including any information deemed to be a part thereof pursuant to Rule 430B, or the omission or alleged omission therefrom of a material fact required to be stated therein or necessary to make the statements therein not misleading or arising out of any untrue statement or alleged untrue statement of a material fact included (A) in any preliminary prospectus, any Issuer Free Writing Prospectus, the General Disclosure Package or the Prospectus (or any amendment or



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supplement thereto) or (B) in any materials or information provided to investors by, or with the approval of, the Company in connection with the marketing of the offering of the Securities (“Marketing Materials”), including any roadshow or investor presentations made to investors by the Company (whether in person or electronically), or the omission or alleged omission in any preliminary prospectus, Issuer Free Writing Prospectus, Prospectus or in any Marketing Materials of a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading;

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

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

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

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

(c) *Actions Against Parties; Notification.* Each indemnified party shall give notice as promptly as reasonably practicable to each indemnifying party of any action commenced against it in respect of which indemnity may be sought hereunder, but failure to so notify an indemnifying party shall not relieve such indemnifying party from any liability hereunder to the extent it is not materially prejudiced as a result thereof and in any event shall not relieve it from any liability which it may have otherwise than on account of this indemnity agreement. In the case of parties indemnified pursuant to Section 6(a), counsel to the indemnified parties shall be selected by the Representatives, and, in the case of parties indemnified pursuant to Section 6(b) above, counsel to the indemnified parties shall be selected by the Company. An indemnifying party may participate at its own expense in the defense of any such action; provided, however, that counsel to the indemnifying party shall not (except with the consent of the indemnified party) also be counsel to the indemnified party. In no event shall the indemnifying parties be

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liable for fees and expenses of more than one counsel (in addition to any local counsel) separate from their own counsel for all indemnified parties in connection with any one action or separate but similar or related actions in the same jurisdiction arising out of the same general allegations or circumstances. No indemnifying party shall, without the prior written consent of the indemnified parties, settle or compromise or consent to the entry of any judgment with respect to any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or any claim whatsoever in respect of which indemnification or contribution could be sought under this Section 6 or Section 7 hereof (whether or not the indemnified parties are actual or potential parties thereto), unless such settlement, compromise or consent (i) includes an unconditional release of each indemnified party from all liability arising out of such litigation, investigation, proceeding or claim and (ii) does not include a statement as to or an admission of fault, culpability or a failure to act by or on behalf of any indemnified party.

(d) *Settlement Without Consent if Failure to Reimburse.* If at any time an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for fees and expenses of counsel, such indemnifying party agrees that it shall be liable for any settlement of the nature contemplated by Section 6(a)(ii) effected without its written consent if (i) such settlement is entered into more than 60 days after receipt by such indemnifying party of the aforesaid request, (ii) such indemnifying party shall have received notice of the terms of such settlement at least 45 days prior to such settlement being entered into and (iii) such indemnifying party shall not have reimbursed such indemnified party in accordance with such request prior to the date of such settlement.

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

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

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

The Company and the Underwriters agree that it would not be just and equitable if contribution pursuant to this Section 7 were determined by pro rata allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation which does not take account of the equitable considerations referred to above in this Section 7. The aggregate amount of losses, liabilities,

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claims, damages and expenses incurred by an indemnified party and referred to above in this Section 7 shall be deemed to include any legal or other expenses reasonably incurred by such indemnified party in investigating, preparing or defending against any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or any claim whatsoever based upon any such untrue or alleged untrue statement or omission or alleged omission.

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

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

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

SECTION 8. Representations, Warranties and Agreements to Survive Delivery. All representations, warranties and agreements contained in this Agreement or in certificates signed by any officer of the Company or any of its subsidiaries (whether signed on behalf of such officer, the Company or such subsidiary) and delivered to the Representatives or counsel to the Underwriters, shall remain operative and in full force and effect, regardless of any investigation made by or on behalf of any Underwriter, any officer, director, employee, partner, member or agent of any Underwriter or any person controlling any Underwriter, or by or on behalf of the Company, any officer, director or employee of the Company or any person controlling the Company, and shall survive delivery of and payment for the Securities.

SECTION 9. Termination of Agreement.

(a) *Termination; General.* The Representatives may terminate this Agreement, by notice to the Company, at any time on or prior to the Closing Date (and, if any Option Securities are to be purchased on an Option Closing Date which occurs after the Closing Date, the Representatives may terminate the obligations of the several Underwriters to purchase such Option Securities, by notice to the Company at any time on or prior to such Option Closing Date) (i) if there has been, since the time of execution of this Agreement or since the respective dates as of which information is given in the General Disclosure Package or the Prospectus (in each case exclusive of any amendments or supplements thereto subsequent to the date of this Agreement), any material adverse change in the condition (financial or other), results of operations, business, properties, management or prospects of the Company and its subsidiaries, taken as a whole, whether or not arising in the ordinary course of business, or (ii) if there has occurred any material adverse change in the financial markets in the United States or the international financial markets, any declaration of a national emergency or war by the United States, any outbreak of hostilities or escalation thereof or other calamity or crisis or any change or development involving a prospective change in national or international political, financial or economic conditions (including, without limitation, as a result of terrorist activities), in each case the effect of which is such as to make it,

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in the judgment of the Representatives, impracticable or inadvisable to market the Securities or to enforce contracts for the sale of the Securities, or (iii) if trading in any securities of the Company has been suspended or materially limited by the Commission or the Nasdaq Global Market, or if trading generally on the NYSE, the Nasdaq Global Select Market, the Nasdaq Global Market, the Nasdaq Capital Market, the NYSE American, the Chicago Board of Options Exchange, the Chicago Mercantile Exchange or the Chicago Board of Trade has been suspended or limited, or minimum or maximum prices for trading have been fixed, or maximum ranges for prices have been required, by any of said exchanges or by order of the Commission, FINRA or any other governmental authority, or a material disruption has occurred in commercial banking or securities settlement or clearance services in the United States or in Europe, or (iv) if a banking moratorium has been declared by either Federal, California or New York authorities.

(b) *Liabilities.* If this Agreement is terminated pursuant to this Section 9, such termination shall be without liability of any party to any other party except as provided in Section 4 hereof, and provided further that Sections 1, 6, 7, 8, 11, 12, 13, 14, 15, 17, 18 and 19 hereof shall survive such termination and remain in full force and effect.

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

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

(2) if the number of Defaulted Securities exceeds 10% of the number of Securities to be purchased on such date, this Agreement or, with respect to any Option Closing Date which occurs after the Closing Date, the obligation of the Underwriters to purchase and of the Company to sell the Option Securities that were to have been purchased and sold on such Option Closing Date, shall terminate without liability on the part of any non-defaulting Underwriter.

No action taken pursuant to this Section 10 shall relieve any defaulting Underwriter from liability in respect of its default.

In the event of any such default which does not result in a termination of this Agreement or, in the case of an Option Closing Date which is after the Closing Date, which does not result in a termination of the obligation of the Underwriters to purchase and the Company to sell the relevant Option Securities, as the case may be, the Representatives shall have the right to postpone the Closing Date or the relevant Option Closing Date, as the case may be, for a period not exceeding seven days in order to effect any required changes in the Registration Statement, the General Disclosure Package or Prospectus or in any other documents or arrangements. As used herein, the term “Underwriter” includes any person substituted for an Underwriter under this Section 10.

SECTION 11. Notices. All notices and other communications hereunder shall be in writing, shall be effective only upon receipt and shall be mailed, delivered by hand or overnight courier, or

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transmitted by fax (with the receipt of such fax to be confirmed by telephone). Notices to the Underwriters shall be directed to the Representatives c/o Merrill Lynch, Pierce, Fenner & Smith Incorporated, One Bryant Park, New York, New York 10036, Attention of Syndicate Department (facsimile: (646) 855-3073), with a copy to ECM Legal (facsimile: (212) 230-8730), c/o Leerink Partners LLC, 255 California Street, 12th Floor, San Francisco, California 94111 (facsimile: (415) 905-7441), with a copy to General Counsel (facsimile: (617) 918-4664) and c/o Stifel, Nicolaus & Company, Incorporated, 787 7th Avenue, 11th Floor, New York, New York 10019 (facsimile: (212) 682-3778), with a copy to General Counsel (facsimile: (415) 364-2694); and notices to the Company shall be directed to it at 5858 Horton Street, Suite 455, Emeryville, California 94608, Attention of Chief Financial Officer, fax no. 858-259-1166 (with such fax to be confirmed by telephone to 858-259-1165).

SECTION 12. Parties. This Agreement shall each inure to the benefit of and be binding upon the Underwriters and the Company and their respective successors. Nothing expressed or mentioned in this Agreement is intended or shall be construed to give any person, firm or corporation, other than the Underwriters and the Company and their respective successors and the controlling persons and other indemnified parties referred to in Sections 6 and 7 and their heirs and legal representatives, any legal or equitable right, remedy or claim under or in respect of this Agreement or any provision herein contained. This Agreement and all conditions and provisions hereof are intended to be for the sole and exclusive benefit of the Underwriters and the Company and their respective successors, and said controlling persons and other indemnified parties and their heirs and legal representatives, and for the benefit of no other person or entity. No purchaser of Securities from any Underwriter shall be deemed to be a successor by reason merely of such purchase.

SECTION 13. Governing Law and Time. THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK. EXCEPT AS OTHERWISE EXPRESSLY SET FORTH HEREIN, SPECIFIED TIMES OF DAY REFER TO NEW YORK CITY TIME.

SECTION 14. Effect of Headings. The Section and Exhibit headings herein are for convenience only and shall not affect the construction hereof.

SECTION 15. Definitions. As used in this Agreement, the following terms have the respective meanings set forth below:

“Applicable Time” means 5:30 p.m. (New York City time) on August 7, 2018, or such other time as agreed by the Company and the Representatives.

“Capital Stock” means any Common Stock, Preferred Stock or other capital stock of the Company.

“Commission” means the Securities and Exchange Commission.

“Company Documents” means (i) all Subject Instruments and (ii) all other contracts, indentures, mortgages, deeds of trust, loan or credit agreements, bonds, notes, debentures, evidences of indebtedness, swap agreements, leases, licenses, sub-licenses, warrants or other instruments or agreements to which the Company or any of its subsidiaries is a party or by which the Company or any of its subsidiaries is bound or to which any of the property or assets of the Company or any of its subsidiaries is subject.

“DTC” means The Depository Trust Company.

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“EDGAR” means the Commission’s Electronic Data Gathering, Analysis and Retrieval System.

“ERISA” means the Employee Retirement Income Security Act of 1974, as amended, and the regulations and published interpretations thereunder.

“Existing Warrants” means any warrants to purchase Common Stock outstanding on the date of this Agreement.

“FCPA” means the Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations thereunder.

“FINRA” means the Financial Industry Regulatory Authority, Inc. or the National Association of Securities Dealers, Inc., or both, as the context shall require.

“GAAP” means generally accepted accounting principles.

“Initial Registration Statement” means the Company’s “automatic shelf registration statement” on Form S-3 (Registration No. 333-220759), as amended (if applicable), including the documents incorporated or deemed to be incorporated by reference therein pursuant to Item 12 of Form S-3 under the 1933 Act and the Rule 430B Information; provided that any Rule 430B Information shall be deemed to be part of the Initial Registration Statement only from and after the time such information is deemed, pursuant to Rule 431B, to be part of the Initial Registration Statement.

“Investors’ Rights Agreement” means the Third Amended and Restated Investors’ Rights Agreement dated as of December 2, 2009, as amended by the Amendment thereto dated as of July 1, 2010 and the Second Amendment thereto dated June 30, 2011, among the Company and the other parties thereto, and as the same may have been further amended, supplemented or restated, if applicable.

“Issuer Free Writing Prospectus” means any “issuer free writing prospectus,” as defined in Rule 433, relating to the Securities that (i) is required to be filed with the Commission by the Company, (ii) is a “road show” that is a “written communication” within the meaning of Rule 433(d)(8)(i), whether or not required to be filed with the Commission, or (iii) is exempt from filing pursuant to Rule 433(d)(5)(i) because it contains a description of the Securities or of the offering that does not reflect the final terms, and all free writing prospectuses that are listed in Schedule III hereto, 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 or required to be retained in the Company’s records pursuant to Rule 433(g).

“Issuer General Use Free Writing Prospectus” means any Issuer Free Writing Prospectus that is intended for general distribution to prospective investors, as evidenced by its being specified in Schedule III hereto.

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

“Lien” means any security interest, mortgage, pledge, lien, encumbrance, claim or equity.

“Lock-Up Period” means the period beginning on and including the date of this Agreement through and including the date that is the 90<sup>th</sup> day after the date of this Agreement.

“NYSE” means the New York Stock Exchange.

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“OFAC” means the Office of Foreign Assets Control of the U.S. Treasury Department.

“Organizational Documents” means (a) in the case of a corporation, its charter and by-laws; (b) in the case of a limited or general partnership, its partnership certificate, certificate of formation or similar organizational document and its partnership agreement; (c) in the case of a limited liability company, its articles of organization, certificate of formation or similar organizational documents and its operating agreement, limited liability company agreement, membership agreement or other similar agreement; (d) in the case of a trust, its certificate of trust, certificate of formation or similar organizational document and its trust agreement or other similar agreement; and (e) in the case of any other entity, the organizational and governing documents of such entity.

“Pre-Pricing Prospectus” means the preliminary prospectus dated August 6, 2018 relating to the Securities in the form first furnished to the Underwriters for use in connection with the offering of the Securities, including the documents incorporated by reference therein pursuant to Item 12 of Form S-3 under the 1933 Act.

“Preferred Stock” means the Company’s preferred stock, par value \$0.001 per share.

“preliminary prospectus” means any prospectus together with, if applicable, the accompanying prospectus supplement used in connection with the offering of the Securities that omitted the public offering price of the Securities or that was captioned “Subject to Completion,” together with the documents incorporated or deemed to be incorporated by reference therein pursuant to Item 12 of Form S-3 under the 1933 Act. The term “preliminary prospectus” includes, without limitation, the Pre-Pricing Prospectus.

“Registration Statement” means the Initial Registration Statement; provided that, if a Rule 462(b) Registration Statement is filed with the Commission, then the term “Registration Statement” shall include such Rule 462(b) Registration Statement from and after the time of such filing, mutatis mutandis.

“Repayment Event” means any event or condition which, either immediately or with notice or passage of time or both, (i) gives the holder of any bond, note, debenture or other evidence of indebtedness (or any person acting on such holder’s behalf) the right to require the repurchase, redemption or repayment of all or a portion of such indebtedness by the Company or any subsidiary of the Company, or (ii) gives any counterparty (or any person acting on such counterparty’s behalf) under any swap agreement, hedging agreement or similar agreement or instrument to which the Company or any subsidiary of the Company is a party the right to liquidate or accelerate the payment obligations or designate an early termination date under such agreement or instrument, as the case may be.

“Rule 164,” “Rule 172,” “Rule 173,” “Rule 405,” “Rule 424(b),” “Rule 430B,” “Rule 433” and “Rule 462(b)” refer to such rules under the 1933 Act.

“Rule 430B Information” means the information included in any preliminary prospectus or the Prospectus or any amendment or supplement to any of the foregoing filed pursuant to Rule 424(b)(2), (b)(5) or (b)(7) that was omitted from the Registration Statement at the time it first became effective but is deemed to be part of and included in the Registration Statement pursuant to Rule 430B.

“Rule 462(b) Registration Statement” means a registration statement filed by the Company pursuant to Rule 462(b) for the purpose of registering any of the Securities under the 1933 Act, including the documents and other information incorporated by reference therein and the Rule 430B Information.

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“Sarbanes-Oxley Act” means the Sarbanes-Oxley Act of 2002 and the rules and regulations promulgated thereunder or implementing the provisions thereof.

“Subject Instruments” means the Existing Warrants and the Investors’ Rights Agreement.

“Termination Event” means any event or condition which gives any person the right, either immediately or with notice or passage of time or both, to terminate or limit (in whole or in part) any Company Document or any rights of the Company or any of its subsidiaries thereunder, including, without limitation, upon the occurrence of a change of control of the Company or other similar events.

“1933 Act” means the Securities Act of 1933, as amended.

“1933 Act Regulations” means the rules and regulations of the Commission under the 1933 Act.

“1934 Act” means the Securities Exchange Act of 1934, as amended.

“1934 Act Regulations” means the rules and regulations of the Commission under the 1934 Act.

“1940 Act” means the Investment Company Act of 1940, as amended.

All references in this Agreement to the Registration Statement, the Initial Registration Statement, any Rule 462(b) Registration Statement, any preliminary prospectus, the Prospectus, any Issuer Free Writing Prospectus or any amendment or supplement to any of the foregoing shall be deemed to include the version thereof filed with the Commission pursuant to EDGAR and all versions thereof delivered (physically or electronically) to the Representatives or the Underwriters.

All references in this Agreement to financial statements and schedules and other information which is “contained,” “included” or “stated” in the Registration Statement, Initial Registration Statement, any Rule 462(b) Registration Statement, any preliminary prospectus or the Prospectus (and all other references of like import) shall be deemed to mean and include all such financial statements and schedules and other information which is incorporated by reference in or otherwise deemed by 1933 Act Regulations to be a part of or included in the Registration Statement, the Initial Registration Statement, any Rule 462(b) Registration Statement, any preliminary prospectus or the Prospectus, as the case may be; and all references in this Agreement to amendments or supplements to the Registration Statement, Initial Registration Statement, any preliminary prospectus or the Prospectus shall be deemed to mean and include the filing of any document under the 1934 Act which is incorporated by reference in or otherwise deemed by 1933 Act Regulations to be a part of or included in the Registration Statement, the Initial Registration Statement, any Rule 462(b) Registration Statement, such preliminary prospectus or the Prospectus, as the case may be.

SECTION 16. Permitted Free Writing Prospectuses. The Company represents, warrants and agrees that it has not made and, unless it obtains the prior written consent of the Representatives, it will not make, and each Underwriter, severally and not jointly, represents, warrants and agrees that it has not made and, unless it obtains the prior written consent of the Company and the Representatives, it will not make, any offer relating to the Securities that constitutes or would constitute an “issuer free writing prospectus” (as defined in Rule 433) or that otherwise constitutes or would constitute a “free writing prospectus” (as defined in Rule 405) or portion thereof required to be filed with the Commission or, in the case of the Company, whether or not required to be filed with the Commission; provided that the prior written consent of the Company and the Representatives shall be deemed to have been given in respect of the Issuer General Use Free Writing Prospectuses, if any, listed on Schedule III hereto and to any



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electronic road show in the form previously provided by the Company to and approved by the Representatives. Any such free writing prospectus consented to or deemed to have been consented to as aforesaid is hereinafter referred to as a “Permitted Free Writing Prospectus.” The Company represents, warrants and agrees that it has treated and will treat each Permitted Free Writing Prospectus as an “issuer free writing prospectus,” as defined in Rule 433, and has complied and will comply with the requirements of Rule 433 applicable to any Permitted Free Writing Prospectus, including timely filing with the Commission where required, legending and record keeping. For the purposes of clarity, the parties hereto agree that all free writing prospectuses, if any, listed in Schedule III hereto are Permitted Free Writing Prospectuses.

SECTION 17. Absence of Fiduciary Relationship. The Company acknowledges and agrees that:

(a) each of the Underwriters is acting solely as an underwriter in connection with the sale of the Securities and no fiduciary, advisory or agency relationship between the Company and any of the Underwriters has been created in respect of any of the transactions contemplated by this Agreement, irrespective of whether or not any of the Underwriters has advised or is advising the Company on other matters;

(b) the public offering price of the Securities and the price to be paid by the Underwriters for the Securities set forth in this Agreement were established by the Company following discussions and arms-length negotiations with the Representatives;

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

(d) it is aware that the Underwriters and their respective affiliates are engaged in a broad range of transactions which may involve interests that differ from those of the Company and that none of the Underwriters has any obligation to disclose such interests and transactions to the Company by virtue of any fiduciary, advisory or agency relationship or otherwise; and

(e) to the fullest extent permitted by applicable law, it waives any claims it may have against any of the Underwriters for breach of fiduciary duty or alleged breach of fiduciary duty and agrees that none of the Underwriters shall have any liability (whether direct or indirect, in contract, tort or otherwise) to it in respect of such a fiduciary duty claim or to any person asserting a fiduciary duty claim on its behalf or in right of it or the Company or any stockholders, employees or creditors of Company.

SECTION 18. Research Analyst Independence. The Company acknowledges that the Underwriters’ research analysts and research departments are required to be independent from their respective investment banking divisions and are subject to certain regulations and internal policies, and that such Underwriters’ research analysts may hold views and make statements or investment recommendations and/or publish research reports with respect to the Company and/or the offering that differ from the views of their respective investment banking divisions. The Company hereby waives and releases, to the fullest extent permitted by applicable law, any claims that the Company may have against the Underwriters with respect to any conflict of interest that may arise from the fact that the views expressed by their independent research analysts and research departments may be different from or inconsistent with the views or advice communicated to the Company by such Underwriters’ investment banking divisions. The Company acknowledges that each of the Underwriters is a full service securities firm and as such from time to time, subject to applicable securities laws, may effect transactions for its own account or the account of its customers and hold long or short positions in debt or equity securities of the companies that may be the subject of the transactions contemplated by this Agreement.

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SECTION 19. Consent to Jurisdiction. The Company hereby submits to the non-exclusive jurisdiction of any U.S. federal or state court located in the Borough of Manhattan, the City and County of New York in any action, suit or proceeding arising out of or relating to or based upon this Agreement or any of the transactions contemplated hereby, and irrevocably and unconditionally waives any objection to the laying of venue of any action, suit or proceeding in any such court and agrees not to plead or claim in any such court that any such action, suit or proceeding has been brought in an inconvenient forum.

SECTION 20. Trial by Jury. The Company (on its behalf and, to the extent permitted by applicable law, on behalf of its stockholders and affiliates), and each of the Underwriters hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Agreement or the transactions contemplated hereby.

**[Signature Page Follows]**

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

Very truly yours,

ZOGENIX, INC.

By: /s/ Michael P. Smith  
Name: Michael P. Smith  
Title: Executive Vice President,  
Chief Financial Officer, Treasurer and Secretary

CONFIRMED AND ACCEPTED,  
as of the date first above written:

MERRILL LYNCH, PIERCE, FENNER & SMITH  
INCORPORATED

By: /s/ Greg Butz  
Name: Greg Butz  
Title: Managing Director

LEERINK PARTNERS LLC

By: /s/ Peter Calveley  
Name: Peter Calveley  
Title: Managing Director

STIFEL, NICOLAUS & COMPANY, INCORPORATED

By: /s/ Keith Lister  
Name: Keith Lister  
Title: Head of Equity Syndicate

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For themselves and as Representatives of the Underwriters named in Schedule I hereto.

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**SCHEDULE I**

**Underwriters**

<b><u>Name of Underwriter</u></b>	<b><u>Number of Initial Securities</u></b>
Merrill Lynch, Pierce, Fenner & Smith Incorporated	2,220,000
Leerink Partners LLC	1,800,000
Stifel, Nicolaus & Company, Incorporated	1,380,000
Mizuho Securities USA LLC	270,000
JMP Securities LLC	270,000
LifeSci Capital LLC	60,000
<b>Total</b>	<b>6,000,000</b>

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**SCHEDULE II**  
**Pricing Information**

Number of Initial Securities: 6,000,000 shares of common stock

Public offering price: \$52.00 per share

Net proceeds, before expenses, to the Company: \$293,280,000

Settlement date: August 10, 2018 (T + 2)

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**SCHEDULE III**

**Issuer Free Writing Prospectus**

None.

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**SCHEDULE IV**

**Subsidiaries**

<u>Name</u>	<u>Jurisdiction of Organization</u>	<u>Type of Entity</u>
Zogenix Europe Limited	United Kingdom	Corporation
Zogenix International Limited	United Kingdom	Corporation



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SCHEDULE V

**List of Persons Subject to Lock-Up**

James B. Breitmeyer, M.D., Ph.D.

Stephen J. Farr, Ph.D.

Roger L. Hawley

Erle T. Mast

Renee P. Tannenbaum, Pharm.D.

Louis C. Bock

Cam L. Garner

Mark Wiggins

Michael P. Smith

Bradley S. Galer, M.D.

Gail M. Farfel, Ph.D.

Ashish Sagrolikar

Lock-Up Agreement

August \_\_\_\_, 2018

Merrill Lynch, Pierce, Fenner & Smith  
Incorporated  
Leerink Partners LLC  
Stifel, Nicolaus & Company, Incorporated  
as Representatives of the several  
Underwriters to be named in the  
within-mentioned Underwriting Agreement

c/o Merrill Lynch, Pierce, Fenner & Smith  
Incorporated  
One Bryant Park  
New York, New York 10036

c/o Leerink Partners LLC  
255 California Street, 12th Floor  
San Francisco, California 94111

c/o Stifel, Nicolaus & Company, Incorporated  
787 7th Avenue  
11th Floor  
New York, New York 10019

Re: Proposed Public Offering by Zogenix, Inc.

Dear Sirs:

The undersigned, a stockholder, an officer and/or a director of Zogenix, Inc., a Delaware corporation (the "Company"), understands that Merrill Lynch, Pierce, Fenner & Smith Incorporated ("Merrill Lynch"), Leerink Partners LLC ("Leerink") and Stifel, Nicolaus & Company, Incorporated ("Stifel" and together with Merrill Lynch and Leerink, the "Representatives") propose to enter into an Underwriting Agreement (the "Underwriting Agreement") with the Company providing for the public offering (the "Public Offering") of shares of the Company's common stock, par value \$0.001 per share (the "Common Stock"). In recognition of the benefit that such an offering will confer upon the undersigned as a stockholder, an officer and/or a director of the Company, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned agrees with each underwriter to be named in the Underwriting Agreement (the "Underwriters") that, during the period beginning on the date hereof and ending on the date that is sixty (60) days from the date of the Underwriting Agreement (the "Lock-Up Period"), the undersigned will not, without the prior written consent of the Representatives, (i) directly or indirectly, offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase or otherwise transfer or dispose of any shares of the Company's Common Stock or any securities convertible into or

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exercisable or exchangeable for Common Stock, whether now owned or hereafter acquired by the undersigned or with respect to which the undersigned has or hereafter acquires the power of disposition (collectively, the "Lock-Up Securities"), or exercise any right with respect to the registration of any of the Lock-up Securities, or file or cause to be filed any registration statement in connection therewith, under the Securities Act of 1933, as amended (the "Securities Act"), or (ii) enter into any swap or any other agreement or any transaction that transfers, in whole or in part, directly or indirectly, the economic consequence of ownership of the Lock-Up Securities, whether any such swap or transaction is to be settled by delivery of Common Stock or other securities, in cash or otherwise.

Notwithstanding the foregoing, and subject to the conditions below, the undersigned may, without the prior written consent of the Representatives:

- (1) transfer any Common Stock or any securities convertible into or exchangeable or exercisable for Common Stock:
  - (a) if the undersigned is a natural person, (i) as a bona fide gift or gifts, (ii) following the death of the undersigned by will, by intestate succession or pursuant to a so-called "living trust" or other revocable trust established to provide for the disposition of the undersigned's property upon the undersigned's death, (iii) to a spouse, former spouse, child or other dependent pursuant to a domestic relations or similar order of a court of competent jurisdiction, or (iv) if the employee is or was an officer, director or employee of the Company, to the Company pursuant to the Company's right of repurchase upon termination of the undersigned's service with the Company, *provided* that, in the case of clauses (i) and (ii) above, such transfer is not for value,
  - (b) if the undersigned is not a natural person, to the general or limited partners, stockholders or, if the undersigned is a limited liability company, members of the undersigned, as the case may be, to the undersigned's Parent (as defined below) or any Subsidiary (as defined below) of the undersigned or the undersigned's Parent, or to any investment fund or similar entity controlled or managed by the undersigned, or, if the undersigned is an investment fund, venture capital fund or similar entity, to affiliates (as defined in Rule 405 of the Securities Act) of the undersigned, *provided* that, in each of the foregoing cases, such transfer is not for value, and
  - (c) to a nominee or custodian of a person or entity to whom a disposition or transfer would be permissible under clause (a) or (b) above, and
- (2) enter into or otherwise establish a trading plan (a "Plan") meeting the requirements of Rule 10b5-1 under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), relating to any sale of shares of Common Stock, if then permitted by the Company and applicable law; *provided* that the shares of Common Stock subject to such Plan may not be sold during the Lock-Up Period and the terms of such Plan shall expressly include such prohibition,

*provided, however,* that (A) in the case of any transfer described in clause (1)(a), (b) or (c) above, it shall be a condition to the transfer that the transferee executes and delivers to the Representatives, acting on behalf of the other Underwriters, not later than one business day prior to such transfer, a written agreement, in substantially the form of this lock-up agreement and otherwise satisfactory in form and substance to the Representatives, (B) in the case of a transfer pursuant to clause (1)(a)(ii) above, if the undersigned or someone acting on behalf of the undersigned is required to file a report under Section 13(d), 13(g) or 16(a) of the Exchange Act, reporting a reduction in beneficial ownership of shares of Common

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Stock or any securities convertible into or exercisable or exchangeable for Common Stock by the undersigned during the Lock-Up Period, such report shall include a statement to the effect that such transfer is not a transfer for value and that such transfer is being made following the death of the undersigned by will or intestate succession or pursuant to a so-called "living trust" or other revocable trust established to provide for the disposition of the undersigned's property upon the undersigned's death, as the case may be, (C) in the case of a transfer pursuant to clause (1)(a)(i), (1)(a)(iii), (1)(a)(iv), (b) or (c) above or the entry into or establishment of a Plan pursuant to clause (2) above, no filing under Rule 144 of the Securities Act, or Section 13(d), 13(g) or 16(a) of the Exchange Act, reporting a change in beneficial ownership of shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock shall be made or required to be made during the Lock-Up Period and (D) in the case of a transfer pursuant to clause (1)(a), (b) or (c) above or the entry into or establishment of a Plan pursuant to clause (2) above, no other filing with the Securities and Exchange Commission, Financial Industry Regulatory Authority or any securities exchange or other public report, filing or announcement shall be made in respect of such transfer or such entry into or establishment of a Plan during the Lock-Up Period. For purposes of this paragraph, "Parent" shall mean any natural person or entity that holds, directly and/or through Subsidiaries, more than 50% of the outstanding capital stock of, or other equity interests in, the undersigned having ordinary voting power in the election of directors or similar persons (measured by voting power and not by number of shares); and "Subsidiary" of any natural person or entity means any entity more than 50% of whose outstanding capital stock or other equity interests having ordinary voting power in the election of directors or other similar persons (measured by voting power and not by number of shares) are owned by such natural person or entity, as the case may be, and/or its other Subsidiaries.

Furthermore, the undersigned may sell shares of Common Stock of the Company purchased by the undersigned on the open market following the Public Offering if and only if (i) such sales are not required to be reported in any public report or filing with the Securities and Exchange Commission, or otherwise and (ii) the undersigned does not otherwise voluntarily effect any public filing or report regarding such sales.

In addition, notwithstanding the lock-up restrictions described herein, the undersigned may at any time after the date hereof exercise any options or warrants to purchase shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock (including by cashless exercise to the extent permitted by the instruments representing such options or warrants), *provided, however*, that in any such case the shares of Common Stock or securities convertible into or exercisable or exchangeable for Common Stock issued upon exercise (net of any cashless exercise) shall be and remain subject to the provisions of this lock-up agreement; *provided, further*, that in the case of any cashless exercise, any report under 16(a) of the Exchange Act reporting a reduction in beneficial ownership of shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock by the undersigned during the Lock-Up Period shall clearly indicate in the footnotes thereto that the filing relates to the circumstances described in this paragraph.

It is understood that, if (i) the Company notifies the Representatives in writing that it does not intend to proceed with the Public Offering, (ii) if the Underwriting Agreement is not executed by August 15, 2018, or (iii) if the Underwriting Agreement (other than the provisions thereof which survive termination) shall, pursuant to its terms, terminate or be terminated for any reason prior to payment for and delivery of the shares of Common Stock and other securities (if any) to be sold thereunder (other than any shares issuable upon exercise of the option granted to the Underwriters), this lock-up agreement shall immediately be terminated and the undersigned shall automatically be released from all of his, her or its obligations under this lock-up agreement.

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The undersigned hereby represents and warrants that the undersigned has full power and authority to enter into this lock-up agreement and that this lock-up agreement has been duly authorized (if applicable), executed and delivered by the undersigned and is a valid and binding agreement of the undersigned. This lock-up agreement and all authority herein conferred are irrevocable and shall survive the death or incapacity of the undersigned (if a natural person) and shall be binding upon the heirs, personal representatives, successors and assigns of the undersigned.

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

Very truly yours,

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

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

12670 High Bluff Drive  
 San Diego, California 92130  
 Tel: +1.858.523.5400 Fax: +1.858.523.5450  
 www.lw.com

**LATHAM & WATKINS** LLP

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Hamburg	Seoul
Hong Kong	Shanghai
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London	Singapore
Los Angeles	Tokyo
Madrid	Washington, D.C.
Milan	

August 8, 2018

Zogenix, Inc.  
 5858 Horton Street, # 455  
 Emeryville, CA 94608

Re: Registration Statement on Form S-3 (No. 333-220759); 6,900,000 shares of Common Stock, par value \$0.001 per share

Ladies and Gentlemen:

We have acted as special counsel to Zogenix, Inc., a Delaware corporation (the "**Company**"), in connection with the proposed issuance of up to 6,900,000 shares (including up to 900,000 shares issuable upon exercise of the underwriters' option to purchase additional shares) of common stock of the Company, par value \$0.001 per share (the "**Shares**"). The Shares are included in a registration statement on Form S-3 under the Securities Act of 1933, as amended (the "**Act**"), filed with the Securities and Exchange Commission (the "**Commission**") on October 2, 2017 (Registration No. 333-220759) (the "**Registration Statement**"), a base prospectus dated October 2, 2017 included in the Registration Statement at the time it originally became effective (the "**Base Prospectus**"), a preliminary prospectus supplement dated August 6, 2018 filed with the Commission pursuant to Rule 424(b) under the Act (together with the Base Prospectus, the "**Preliminary Prospectus**") and a prospectus supplement dated August 7, 2018 filed with the Commission pursuant to Rule 424(b) under the Act (together with the Base Prospectus, the "**Prospectus**"). The Shares are being sold pursuant to an underwriting agreement dated August 7, 2018 by and among Merrill Lynch, Pierce, Fenner & Smith Incorporated, Leerink Partners LLC and Stifel, Nicolaus & Company, Incorporated, as representatives of the several underwriters listed on Schedule I thereto, and the Company (the "**Underwriting Agreement**"). This opinion 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, the Preliminary Prospectus or the Prospectus, other than as expressly stated herein with respect to the issue of the Shares.

**LATHAM & WATKINS** LLP

As such counsel, we have examined such matters of fact and questions of law as we have considered appropriate for purposes of this 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 (the “*DGCL*”), and we express no opinion with respect to any other laws.

Subject to the foregoing and the other matters set forth herein, it is our opinion that, as of the date hereof, 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, and have been issued by the Company against payment therefor (not less than par value) in the circumstances contemplated by the Underwriting Agreement, the issue and sale of the Shares will have been duly authorized by all necessary corporate action of the Company, and the Shares will be validly issued, fully paid and nonassessable. In rendering the foregoing opinion, we have assumed that the Company will comply with all applicable notice requirements regarding uncertificated shares provided in the DGCL.

We bring your attention to the fact that Latham & Watkins LLP attorneys rendering services in connection with the offering own certain securities of the Company.

This opinion is for your benefit in connection with the Registration Statement and may be relied upon by you and by persons entitled to rely upon it pursuant to the applicable provisions of the Act. We consent to your filing this opinion as an exhibit to the Company’s Form 8-K dated August 7, 2018 and to the reference to our firm in 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/ Latham & Watkins LLP

**Zogenix Announces Proposed Public Offering of 6,000,000 Shares of Common Stock**

EMERYVILLE, CA – August 6, 2018 — Zogenix, Inc. (Nasdaq:ZGNX), a pharmaceutical company developing therapies for the treatment of orphan and central nervous system (CNS) disorders, announced today that it intends to offer and sell, subject to market and other conditions, 6,000,000 shares of its common stock in an underwritten public offering. Zogenix also expects to grant to the underwriters a 30-day option to purchase up to an additional 900,000 shares of common stock. All of the shares to be sold in the offering are to be sold by Zogenix. Zogenix intends to use the net proceeds from the proposed offering to fund regulatory submissions and commercial infrastructure of ZX008 for Dravet syndrome, to fund clinical research and development of ZX008, including Phase 3 clinical development for Lennox-Gastaut syndrome, and for working capital and general corporate purposes.

BofA Merrill Lynch, Leerink Partners and Stifel are acting as joint book-running managers for the offering. Mizuho Securities and JMP Securities are acting as co-lead managers for the offering, and LifeSci Capital is acting as co-manager for the offering. The offering is subject to market conditions, and there can be no assurance as to whether or when the offering may be completed, or as to the actual size or terms of the offering.

The securities described above are being offered by Zogenix pursuant to a shelf registration statement filed by Zogenix with the Securities and Exchange Commission (SEC) that became automatically effective on October 2, 2017. A preliminary prospectus supplement and accompanying prospectus relating to this offering will be filed with the SEC. When available, copies of the preliminary prospectus supplement and the accompanying prospectus relating to this offering may be obtained from: BofA Merrill Lynch, NC1-004-03-43, 200 North College Street, 3rd Floor, Charlotte, NC 28255-0001, Attention: Prospectus Department, or by email at [dg.prospectus\\_requests@baml.com](mailto:dg.prospectus_requests@baml.com); or from Leerink Partners LLC, Attention: Syndicate Department, One Federal Street, 37th Floor, Boston, MA 02110, by telephone at 800-808-7525, ext. 6132 or by email at [Syndicate@Leerink.com](mailto:Syndicate@Leerink.com); or from Stifel, Nicolaus & Company, Incorporated, Attention: Syndicate, One Montgomery Street, Suite 3700, San Francisco, California 94104, by telephone at 415-364-2720 or by email at [syndprospectus@stifel.com](mailto:syndprospectus@stifel.com). Electronic copies of the preliminary prospectus supplement and accompanying prospectus will also be available on the website of the SEC at <http://www.sec.gov>.

This press release shall not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of these securities in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to the registration or qualification under the securities laws of any such jurisdiction.

**About Zogenix**

Zogenix, Inc. (Nasdaq:ZGNX) is a pharmaceutical company committed to developing and commercializing CNS therapies that address specific clinical needs for people living with orphan and other CNS disorders who need innovative treatment alternatives to improve their daily functioning.

**Forward Looking Statements**



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This press release contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended. All statements other than statements of historical facts contained in this press release are forward-looking statements, including statements regarding Zogenix's expectations of the completion, timing and size of the proposed public offering and the anticipated use of proceeds therefrom. In some cases, you can identify forward-looking statements by terms such as "may," "will," "should," "expect," "plan," "anticipate," "could," "intend," "target," "project," "contemplates," "believes," "estimates," "predicts," "potential" or "continue" or the negative of these terms or other similar expressions. These forward-looking statements speak only as of the date of this press release and are subject to a number of risks, uncertainties and assumptions, including the risks and uncertainties associated with market conditions and the satisfaction of customary closing conditions related to the proposed public offering, as well as risks and uncertainties inherent in Zogenix's business, including those described in the company's periodic filings with the SEC. The events and circumstances reflected in the company's forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. Additional information on risks facing Zogenix can be found under the heading "Risk Factors" in Zogenix's periodic reports, including its annual report on Form 10-K for the year ended December 31, 2017, its quarterly reports on Form 10-Q for the quarters ended March 31, 2018 and June 30, 2018, and in the preliminary prospectus supplement related to the proposed offering to be filed with the SEC on or about the date hereof, each available on the SEC's web site at [www.sec.gov](http://www.sec.gov). Except as required by applicable law, the company does not plan to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise.

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CONTACT: Investors: Andrew McDonald

Founding Partner, LifeSci Advisors LLC

646-597-6987 | [Andrew@lifesciadvisors.com](mailto:Andrew@lifesciadvisors.com)

**Zogenix Prices Public Offering of Common Stock**

EMERYVILLE, CA – August 7, 2018 — Zogenix, Inc. (Nasdaq:ZGNX), a pharmaceutical company developing therapies for the treatment of orphan and central nervous system (CNS) disorders, announced today that it has priced an underwritten public offering of 6,000,000 shares of its common stock at a price to the public of \$52.00 per share. The gross proceeds to Zogenix from the offering, before underwriting discounts and commissions and offering costs, are expected to be \$312,000,000. Zogenix has granted the underwriters a 30-day option to purchase up to an additional 900,000 shares of common stock. All of the shares to be sold in the offering are being sold by Zogenix. The offering is expected to close on or about August 10, 2018, subject to satisfaction of customary closing conditions. Zogenix intends to use the net proceeds from the proposed offering to fund regulatory submissions and commercial infrastructure of ZX008 for Dravet syndrome, to fund clinical research and development of ZX008, including Phase 3 clinical development for Lennox-Gastaut syndrome, and for working capital and general corporate purposes.

BofA Merrill Lynch, Leerink Partners and Stifel are acting as joint book-running managers for the offering. Mizuho Securities and JMP Securities are acting as co-lead managers for the offering, and LifeSci Capital LLC is acting as co-manager for the offering.

The securities described above are being offered by Zogenix pursuant to a shelf registration statement filed by Zogenix with the Securities and Exchange Commission (SEC) that became automatically effective on October 2, 2017. A preliminary prospectus supplement relating to this offering has been filed with the SEC and a final prospectus supplement relating to this offering will be filed with the SEC. The offering may be made only by means of a prospectus supplement and accompanying prospectus. When available, copies of the final prospectus supplement and the accompanying prospectus relating to this offering may be obtained from: BofA Merrill Lynch, NC1-004-03-43, 200 North College Street, 3rd Floor, Charlotte, NC 28255-0001, Attention: Prospectus Department, or by email at [dg.prospectus\\_requests@baml.com](mailto:dg.prospectus_requests@baml.com); or from Leerink Partners LLC, Attention: Syndicate Department, One Federal Street, 37th Floor, Boston, MA 02110, by telephone at 800-808-7525, ext. 6132 or by email at [Syndicate@Leerink.com](mailto:Syndicate@Leerink.com); or from Stifel, Nicolaus & Company, Incorporated, Attention: Syndicate, One Montgomery Street, Suite 3700, San Francisco, California 94104, by telephone at 415-364-2720 or by email at [syndprospectus@stifel.com](mailto:syndprospectus@stifel.com). Electronic copies of the final prospectus supplement and accompanying prospectus will also be available on the website of the SEC at <http://www.sec.gov>.

This press release shall not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of these securities in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to the registration or qualification under the securities laws of any such jurisdiction.

**About Zogenix**

Zogenix, Inc. (Nasdaq:ZGNX) is a pharmaceutical company committed to developing and commercializing CNS therapies that address specific clinical needs for people living with orphan

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and other CNS disorders who need innovative treatment alternatives to improve their daily functioning.

### **Forward Looking Statements**

This press release contains forward-looking statements within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended. All statements other than statements of historical facts contained in this press release are forward-looking statements, including statements regarding Zogenix's expectations of market conditions and the satisfaction of customary closing conditions related to the public offering and the anticipated use of proceeds therefrom. In some cases, you can identify forward-looking statements by terms such as "may," "will," "should," "expect," "plan," "anticipate," "could," "intend," "target," "project," "contemplates," "believes," "estimates," "predicts," "potential" or "continue" or the negative of these terms or other similar expressions. These forward-looking statements speak only as of the date of this press release and are subject to a number of risks, uncertainties and assumptions, including the risks and uncertainties associated with market conditions and the satisfaction of customary closing conditions related to the public offering, as well as risks and uncertainties inherent in Zogenix's business, including those described in the company's periodic filings with the SEC. The events and circumstances reflected in the company's forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. Additional information on risks facing Zogenix can be found under the heading "Risk Factors" in Zogenix's periodic reports, including its annual report on Form 10-K for the year ended December 31, 2017, its quarterly reports on Form 10-Q for the quarters ended March 31, 2018 and June 30, 2018, and in the preliminary prospectus supplement related to the proposed offering filed with the SEC on August 6, 2018, each available on the SEC's web site at [www.sec.gov](http://www.sec.gov). Except as required by applicable law, the company does not plan to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise.

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