

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, DC 20549

FORM 8-K

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

Date of Report (Date of earliest event reported): October 24, 2019

OPKO Health, Inc.

(Exact Name of Registrant as Specified in Charter)

Delaware
(State or Other Jurisdiction
of Incorporation)

001-33528
(Commission
File Number)

75-2402409
(IRS Employer
Identification No.)

4400 Biscayne Blvd.
Miami, Florida
(Address of Principal Executive Offices)

33137
(Zip Code)

Registrant's telephone number, including area code: (305) 575-4100

Not Applicable
Former name or former address, if changed since last report

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

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

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value \$0.01 per share	OPK	NASDAQ Global Select Market

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

Emerging growth company ☐

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

Item 1.01. Entry into a Material Definitive Agreement.

On October 24, 2019, OPKO Health, Inc., a Delaware corporation (the “Company”), entered into an underwriting agreement (the “Underwriting Agreement”) with Jefferies LLC, Piper Jaffray & Co. and Guggenheim Securities, LLC, as representatives of the several underwriters identified therein (the “Underwriters”), pursuant to which the Company agreed to issue and sell to the Underwriters, and the Underwriters agreed to purchase from the Company, 50,000,000 shares (the “Firm Shares”) of the Company’s common stock, par value \$0.01 per share (“Common Stock”), in a registered public offering under the Securities Act of 1933, as amended (the “Securities Act”), pursuant to the Company’s effective shelf registration statement on Form S-3 (File No. 333-229400) and a related prospectus, together with the related prospectus supplements for the underwritten public offering of the Common Stock, filed with the Securities and Exchange Commission.

In addition, the Company granted the Underwriters a 30-day option to purchase up to an additional 7,500,000 shares of Common Stock.

The Company intends to use the net proceeds received from the offering of the Common Stock to fund research and development, to further develop and commercialize its portfolio of proprietary pharmaceutical and diagnostic products and for working capital, capital expenditures, acquisitions and other general corporate purposes.

The Underwriting Agreement includes customary representations, warranties and covenants by the Company and customary closing conditions. Under the terms of the Underwriting Agreement, the Company has agreed to indemnify the Underwriters against certain liabilities.

The closing of the issuance of the Firm Shares occurred on October 29, 2019.

The foregoing description of the Underwriting Agreement is qualified in its entirety by reference to the complete text of the Underwriting Agreement attached as Exhibit 1.1 to this Current Report on Form 8-K and is incorporated by reference herein. A copy of the opinion of Greenberg Traurig, LLP regarding the validity of the Common Stock issued in this offering is filed as Exhibit 5.1 to this Current Report on Form 8-K.

Item 9.01. Financial Statements and Exhibits.

(d) *Exhibits.*

Exhibit Number	Description
1.1	<u>Underwriting Agreement, dated February 4, 2019, by and between the Company and Jefferies LLC.</u>
5.1	<u>Opinion of Greenberg Traurig, LLP</u>
23.1	<u>Consent of Greenberg Traurig, LLP (set forth in Exhibit 5.1).</u>
104	Cover Page Interactive Data File (embedded within the Inline XBRL document).

SIGNATURES

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

Date: October 29, 2019

OPKO HEALTH, INC.

By: /s/ Adam Logal

Name: Adam Logal

Title: Senior Vice President, Chief Financial Officer

50,000,000 Shares

OPKO Health, Inc.

UNDERWRITING AGREEMENT

October 24, 2019

JEFFERIES LLC
PIPER JAFFRAY & CO.
GUGGENHEIM SECURITIES, LLC
as Representatives of the several Underwriters
identified on Schedule A
520 Madison Avenue
New York, New York 10022

Ladies and Gentlemen:

Introductory. OPKO Health, Inc., a Delaware corporation (the “**Company**”), proposes to issue and sell to the several underwriters named in Schedule A hereto (the “**Underwriters**”) an aggregate of 50,000,000 shares of its common stock, par value \$0.01 per share (the “**Shares**”). The 50,000,000 Shares to be sold by the Company are referred to herein as the “**Firm Shares**.” In addition, the Company has granted to the Underwriters an option to purchase up to an additional 7,500,000 Shares as provided in Section 2. The additional 7,500,000 Shares to be sold by the Company pursuant to such option are referred to herein as the “**Optional Shares**.” The Firm Shares and, if and to the extent such option is exercised, the Optional Shares are collectively called the “**Securities**.” Each of Jefferies LLC (“**Jefferies**”), Piper Jaffray & Co. (“**Piper Jaffray**”) and Guggenheim Securities, LLC (“**Guggenheim**”) hereby agree to act as representatives of the several Underwriters (collectively in such capacity, the “**Representatives**”) in connection with the offering and sale of the Securities contemplated hereby (the “**Offering**”). If there are no underwriters listed on Schedule A other than you, then the term “Representatives” as used herein shall mean you, as Underwriters, and the term “Underwriters” shall mean either the singular or the plural, as the context requires.

The Company has prepared and filed with the Securities and Exchange Commission (the “**Commission**”) a shelf registration statement on Form S-3, File No. 333-229400, including a base prospectus (the “**Base Prospectus**”) to be used in connection with the public offering and sale of the Securities. Such registration statement, as amended, including the financial statements, exhibits and schedules thereto, in the form in which it became effective under the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder (collectively, the “**Securities Act**”), including all documents incorporated or deemed to be incorporated by reference therein and any information deemed to be a part thereof at the time of effectiveness pursuant to Rule 430A or 430B under the Securities Act, is called the “**Registration Statement**.” Any registration statement filed by the Company pursuant to Rule 462(b) under the Securities Act in connection with the offer and sale of the Securities is called the “**Rule 462(b) Registration Statement**,” and from and after the date and time of filing of any such Rule 462(b) Registration Statement the term “Registration Statement” shall include the Rule 462(b) Registration Statement. The preliminary prospectus supplement dated October 22, 2019, as supplemented by the preliminary prospectus supplement dated October 24, 2019, describing the Securities and the Offering (together, the “**Preliminary Prospectus Supplement**”), together with the Base Prospectus, is called the “**Preliminary Prospectus**,” and the Preliminary Prospectus and any other prospectus supplement to the Base Prospectus in preliminary form that describes the Securities and the Offering and is used prior to the

filing of the Prospectus (as defined below), together with the Base Prospectus, is called a “**preliminary prospectus**.” As used herein, the term “**Prospectus**” shall mean the final prospectus supplement to the Base Prospectus that describes the Securities and the Offering (the “**Final Prospectus Supplement**”), together with the Base Prospectus, in the form first used by the Underwriters to confirm sales of the Securities or in the form first made available to the Underwriters by the Company to meet requests of purchasers pursuant to Rule 173 under the Securities Act. References herein to the Preliminary Prospectus, any preliminary prospectus and the Prospectus shall refer to both the prospectus supplement and the Base Prospectus components of such prospectus. As used herein, “**Applicable Time**” is 6:15 p.m. (New York City time) on October 24, 2019. As used herein, “**free writing prospectus**” has the meaning set forth in Rule 405 under the Securities Act, and “**Time of Sale Prospectus**” means the Preliminary Prospectus, as amended or supplemented immediately prior to the Applicable Time, together with the free writing prospectuses, if any, identified in Schedule B hereto. As used herein, “**Road Show**” means a “road show” (as defined in Rule 433 under the Securities Act) relating to the Offering that is a “written communication” (as defined in Rule 405 under the Securities Act).

All references in this Agreement to the Registration Statement, the Preliminary Prospectus, any preliminary prospectus, the Base Prospectus and the Prospectus shall include the documents incorporated or deemed to be incorporated by reference therein. All references in this Agreement to financial statements and schedules and other information which are “contained,” “included” or “stated” in, or “part of” the Registration Statement, the Rule 462(b) Registration Statement, the Preliminary Prospectus, any preliminary prospectus, the Base Prospectus, the Time of Sale 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 or is deemed to be incorporated by reference in the Registration Statement, the Rule 462(b) Registration Statement, the Preliminary Prospectus, any preliminary prospectus, the Base Prospectus, the Time of Sale Prospectus or the Prospectus, as the case may be. All references in this Agreement to amendments or supplements to the Registration Statement, the Preliminary Prospectus, any preliminary prospectus, the Base Prospectus, the Time of Sale Prospectus or the Prospectus shall be deemed to mean and include the filing of any document under the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder (collectively, the “**Exchange Act**”) that is or is deemed to be incorporated by reference in the Registration Statement, the Preliminary Prospectus, any preliminary prospectus, the Base Prospectus, or the Prospectus, as the case may be. All references in this Agreement to the Registration Statement, the Preliminary Prospectus, any preliminary prospectus, the Base Prospectus or the Prospectus, any amendments or supplements to any of the foregoing, or any free writing prospectus, shall include any copy thereof filed with the Commission pursuant to its Electronic Data Gathering, Analysis and Retrieval System (“**EDGAR**”).

The Company hereby confirms its agreements with the Underwriters as follows:

Section 1. Representations and Warranties of the Company.

A. The Company hereby represents, warrants and covenants to each Underwriter, as of the date of this Agreement, as of the First Closing Date (as hereinafter defined) and as of each Option Closing Date (as hereinafter defined), if any, as follows:

(a) Compliance with Registration Requirements. The Registration Statement has become effective under the Securities Act. The Company has complied, to its knowledge, with all requests, if any, received from the Commission for additional or supplemental information with respect to the Registration Statement. No stop order suspending the effectiveness of the Registration Statement is in effect and no proceedings for such purpose have been instituted or are pending or, to the best knowledge of the Company, are contemplated or threatened by the Commission. At the time the Company’s Annual Report on Form 10-K for the year ended December 31, 2018 was filed with the Commission, or, if later, at the

time the Registration Statement was originally filed with the Commission, as well as at the time the Company or any person acting on its behalf (within the meaning, for this clause only, of Rule 163(c) under the Securities Act) made any offer relating to the Securities in reliance on the exemption of Rule 163 under the Securities Act, the Company was a “well known seasoned issuer” as defined in Rule 405 under the Securities Act. The Registration Statement is an “automatic shelf registration statement,” as defined in Rule 405 under the Securities Act, and became effective on January 29, 2019. The Company has not received from the Commission any notice pursuant to Rule 401(g)(2) under the Securities Act objecting to the Company’s use of the automatic shelf registration form. The Company meets the requirements for use of Form S-3 under the Securities Act specified in Financial Industry Regulatory Authority (“FINRA”) Conduct Rule 5110(B)(7)(C)(i). The documents incorporated or deemed to be incorporated by reference in the Registration Statement, the Time of Sale Prospectus and the Prospectus, at the time they were or hereafter are filed with the Commission, or became effective under the Exchange Act, as the case may be, complied or will comply, respectively, in all material respects with the requirements of the Exchange Act.

(b) **Disclosure.** Each preliminary prospectus and the Prospectus when filed complied in all material respects with the Securities Act and, if filed by electronic transmission pursuant to EDGAR, was identical (except as may be permitted by Regulation S-T under the Securities Act) to the copy thereof delivered to the Underwriters for use in connection with the offer and sale of the Securities. Each of the Registration Statement and any post-effective amendment thereto, at the time it became or becomes effective, complied and will comply in all material respects with the Securities Act and did not and will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. As of the Applicable Time, the Time of Sale Prospectus did not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading. The Prospectus, as of its date, did not, and at the First Closing Date (as defined in Section 2) and at each applicable Option Closing Date (as defined in Section 2), will not, contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The representations and warranties set forth in the three immediately preceding sentences do not apply to statements in or omissions from the Registration Statement or any post-effective amendment thereto, or the Prospectus or the Time of Sale Prospectus, or any amendments or supplements thereto, made in reliance upon and in conformity with written information relating to any Underwriter furnished to the Company in writing by the Representatives expressly for use therein, it being understood and agreed that the only such information consists of the information described in Section 9(b) below. There are no contracts or other documents required to be described in the Time of Sale Prospectus or the Prospectus or to be filed as an exhibit to the Registration Statement which have not been described or filed as required.

(c) **Free Writing Prospectuses; Road Show.** As of the determination date referenced in Rule 164(h) under the Securities Act, the Company was not, is not or will not be (as applicable) an “ineligible issuer” in connection with the Offering pursuant to Rules 164, 405 and 433 under the Securities Act. Each free writing prospectus that the Company is required to file pursuant to Rule 433(d) under the Securities Act has been, or will be, filed with the Commission in accordance with the requirements of the Securities Act. Each free writing prospectus that the Company has filed, or is required to file, pursuant to Rule 433(d) under the Securities Act or that was prepared by or on behalf of or used or referred to by the Company complies or will comply in all material respects with the requirements of Rule 433 under the Securities Act, including timely filing with the Commission, retention and legending, as applicable, and each such free writing prospectus, as of its issue date and at all subsequent times through the completion of the public offer 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, the Prospectus or any preliminary prospectus, unless such information has been superseded or modified as of such time. Except for the free writing prospectuses, if any, identified in Schedule B, and electronic Road

Shows, if any, furnished to you before first use, the Company has not prepared, used or referred to, and will not, without your prior written consent, such consent not to be unreasonably withheld pursuant to Section 3(A)(c), prepare, use or refer to, any free writing prospectus. Each Road Show, when considered together with the Time of Sale Prospectus, did not, as of the Applicable Time, contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(d) ***Distribution of Offering Material By the Company.*** Prior to the later of (i) the expiration or termination of the option granted to the several Underwriters in Section 2 and (ii) the completion of the Underwriters' distribution of the Securities, the Company has not distributed and will not distribute any offering material in connection with the Offering other than the Registration Statement, the Time of Sale Prospectus, the Prospectus or any free writing prospectus reviewed and consented to by the Representatives, such consent not to be unreasonably withheld pursuant to Section 3(A)(c), and the free writing prospectuses, if any, identified on Schedule B hereto.

(e) ***The Underwriting Agreement.*** This Agreement has been duly and validly authorized, executed and delivered by the Company.

(f) ***The Securities.*** The Securities have been duly and validly authorized for issuance and sale pursuant to this Agreement by the Company, and when issued and delivered to and paid for by the Underwriters in accordance with the terms of this Agreement, will be validly issued, fully paid and nonassessable, and will conform to the description of the Shares contained in the Registration Statement under the caption "Description of Capital Stock," and the issuance and sale of the Securities is not subject to any preemptive rights, rights of first refusal or other similar rights to subscribe for or purchase the Securities.

(g) ***No Applicable Registration or Other Similar Rights.*** There are no persons with registration or other similar rights to have any equity or debt securities registered for sale under the Registration Statement or included in the Offering.

(h) ***[Reserved]***

(i) ***No Material Adverse Change.*** Except as otherwise disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus, subsequent to the respective dates as of which information is given in the Registration Statement, the Time of Sale Prospectus and the Prospectus: (i) there has been no material adverse change, or any development that could reasonably be expected to result in a material adverse change in the condition, financial or otherwise, or in the earnings, business, properties, operations, assets, liabilities or prospects, whether or not arising from transactions in the ordinary course of business, of the Company and its subsidiaries, considered as one entity (any such change being referred to herein as a "**Material Adverse Change**"); (ii) the Company and its subsidiaries, considered as one entity, have not incurred any material liability or obligation, indirect, direct or contingent, not in the ordinary course of business, including without limitation any losses or interference with its business from fire, explosion, flood, earthquakes, accident or other calamity, whether or not covered by insurance, or from any strike, labor dispute or court or governmental action, order or decree, that are material, individually or in the aggregate, to the Company and its subsidiaries, considered as one entity, and have not entered into any material transactions not in the ordinary course of business; and (iii) there has been no dividend or distribution of any kind declared, paid or made by the Company or, except for dividends paid to the Company or other subsidiaries, by any of the Company's subsidiaries on any class of capital stock, or any repurchase or redemption by the Company or any of its subsidiaries of any class of capital stock.

(j) **Independent Accountants.** Ernst & Young LLP, which has expressed its opinion with respect to the financial statements (which term as used in this Agreement includes the related notes thereto) and supporting schedules filed with the Commission as a part of the Registration Statement, the Time of Sale Prospectus and the Prospectus, is (i) an independent registered public accounting firm as required by the Securities Act, the Exchange Act, and the rules of the Public Company Accounting Oversight Board (“PCAOB”), (ii) to the knowledge of the Company, in compliance with the applicable requirements relating to the qualification of accountants under Rule 2-01 of Regulation S-X under the Securities Act and (iii) to the knowledge of the Company, a registered public accounting firm as defined by the PCAOB whose registration has not been suspended or revoked and who has not requested such registration to be withdrawn.

(k) **Financial Statements.** The financial statements filed with the Commission as a part of the Registration Statement, the Time of Sale Prospectus and the Prospectus present fairly in all material respects the consolidated financial position of the Company and its subsidiaries as of the dates indicated and the results of their operations, changes in stockholders’ equity and cash flows for the periods specified, it being understood that unaudited interim financial statements are subject to normal, year-end audit adjustments, which are not expected to be material. The supporting schedules included in the Registration Statement present fairly in all material respects the information required to be stated therein. Such financial statements and supporting schedules have been prepared in conformity with generally accepted accounting principles as applied in the United States and applied on a consistent basis throughout the periods involved, except as may be expressly stated in the related notes thereto. The interactive data in eXtensible Business Reporting Language included or incorporated by reference in the Registration Statement fairly presents in all material respects the information called for and has been prepared in accordance with the Commission’s rules and guidelines applicable thereto. No other financial statements or supporting schedules are required to be included or incorporated by reference in the Registration Statement, the Time of Sale Prospectus or the Prospectus. The financial data set forth in each of the Registration Statement, the Time of Sale Prospectus and the Prospectus under the captions “Recent Developments,” “Selected Financial Data” and “Capitalization” fairly present in all material respects the information set forth therein on a basis consistent with that of the audited financial statements contained in the Registration Statement, the Time of Sale Prospectus and the Prospectus. All disclosures contained in the Registration Statement, any preliminary prospectus, the Prospectus and any free writing prospectus that constitute non-GAAP financial measures (as defined by the rules and regulations under the Securities Act and the Exchange Act) comply in all material respects with Regulation G under the Exchange Act and Item 10 of Regulation S-K under the Securities Act, as applicable. To the Company’s knowledge, no person who has been suspended or barred from being associated with a registered public accounting firm, or who has failed to comply with any sanction pursuant to Rule 5300 promulgated by the PCAOB, has participated in or otherwise aided the preparation of, or audited, the financial statements, supporting schedules or other financial data filed with the Commission as a part of the Registration Statement, the Time of Sale Prospectus and the Prospectus.

(l) **Company’s Accounting System.** The Company and each of its subsidiaries make and keep accurate books and records and maintain a system of internal accounting controls sufficient to provide reasonable assurance that: (i) transactions are executed in accordance with management’s general or specific authorization; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles as applied in the United States and to maintain accountability for assets; (iii) access to assets is permitted only in accordance with management’s general or specific authorization; (iv) the recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences; and (v) the interactive data in eXtensible Business Reporting Language included or incorporated by reference in the Registration Statement, the Time of Sale Prospectus and the Prospectus fairly presents in all material respects the information called for and is prepared in accordance with the Commission’s rules and guidelines applicable thereto.

(m) Disclosure Controls and Procedures; Deficiencies in or Changes to Internal Control Over Financial Reporting The Company has established and maintains disclosure controls and procedures (as defined in Rules 13a-15 and 15d-15 under the Exchange Act), which (i) are designed to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to the Company's principal executive officer and its principal financial officer by others within those entities, particularly during the periods in which the periodic reports required under the Exchange Act are being prepared; (ii) have been evaluated by management of the Company for effectiveness as of the end of the Company's most recent fiscal quarter; and (iii) are effective in all material respects to perform the functions for which they were established, except as otherwise disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus. Except as otherwise disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus, since the end of the Company's most recent audited fiscal year (i) there have been no significant deficiencies or material weaknesses in the Company's internal control over financial reporting (whether or not remediated) and no change in the Company's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting and (ii) the Company is not aware of any fraud, whether or not material, that involves management or other employees who have a significant role in the Company's internal control over financial reporting. The Company is not aware of any change in its internal control over financial reporting that has occurred during its most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

(n) Incorporation and Good Standing of the Company. The Company has been duly incorporated and is validly existing as a corporation in good standing under the laws of the jurisdiction of its incorporation and has the corporate power and authority to own, lease and operate its properties and to conduct its business as described in the Registration Statement, the Time of Sale Prospectus and the Prospectus and to enter into and perform its obligations under this Agreement and to consummate the transactions contemplated hereby, except where the failure to be in good standing would not reasonably be expected to result in a Material Adverse Change. The Company is duly qualified as a foreign corporation to transact business and is in good standing in the State of jurisdiction of its principal place of business and each other jurisdiction in which such qualification is required, whether by reason of the ownership or leasing of property or the conduct of business, except where the failure to be so qualified would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Change.

(o) Subsidiaries. Each of the Company's "subsidiaries" (for purposes of this Agreement, as defined in Rule 405 under the Securities Act) has been duly incorporated or organized, as the case may be, and is validly existing as a corporation, partnership or limited liability company, as applicable, in good standing under the laws of the jurisdiction of its incorporation or organization and has the power and authority (corporate or other) to own, lease and operate its properties and to conduct its business as described in the Registration Statement, the Time of Sale Prospectus and the Prospectus, except where the failure to be so incorporated, organized, or in good standing would not reasonably be expected to result in a Material Adverse Change. Each of the Company's subsidiaries is duly qualified as a foreign corporation, partnership or limited liability company, as applicable, to transact business and is in good standing in each jurisdiction in which such qualification is required, whether by reason of the ownership or leasing of property or the conduct of business, except where the failure to be so qualified or in good standing would not reasonably be expected to result in a Material Adverse Change. The Company does not own or control, directly or indirectly, any corporation, association or other entity other than (i) the subsidiaries listed in Exhibit 21 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2018 and (ii) such other entities omitted from Exhibit 21 as, when such omitted entities are considered in the aggregate as a single subsidiary, would not constitute a "significant subsidiary" within the meaning of Rule 1-02(w) of Regulation S-X.

(p) **Capitalization and Other Capital Stock Matters.** The authorized, issued and outstanding capital stock of the Company is as set forth in the Registration Statement, the Time of Sale Prospectus and the Prospectus under the caption “Capitalization” (other than for subsequent issuances, if any, pursuant to employee benefit plans, or upon the exercise of outstanding options or warrants, in each case described in the Registration Statement, the Time of Sale Prospectus and the Prospectus). The Securities conform in all material respects to the description thereof contained in the Time of Sale Prospectus. All of the issued and outstanding shares of capital stock of the Company and each of its subsidiaries have been duly authorized and validly issued, are fully paid and nonassessable and have been issued in compliance with all federal and state securities laws. None of the outstanding Shares were issued in violation of any preemptive rights, rights of first refusal or other similar rights to subscribe for or purchase securities of the Company. Except as otherwise disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus, all of the outstanding shares of capital stock and other equity interests, as the case may be, of the Company’s subsidiaries are owned by the Company, directly or indirectly through its subsidiaries, free and clear of all liens, encumbrances, equity or restrictions on transferability (other than those imposed by the Securities Act and the securities laws or blue sky laws of certain U.S. state or non U.S. jurisdictions) or voting restrictions. There are no authorized or outstanding options, warrants, preemptive rights, rights of first refusal or other rights to purchase, or equity or debt securities convertible into or exchangeable or exercisable for, any capital stock of the Company or any of its subsidiaries other than those described in the Registration Statement, the Time of Sale Prospectus and the Prospectus. The descriptions of the Company’s stock option, stock bonus and other stock plans or arrangements, and the options or other rights granted thereunder, set forth in the Registration Statement, the Time of Sale Prospectus and the Prospectus accurately and fairly presents the information required to be shown with respect to such plans, arrangements, options and rights.

(q) **Stock Exchange Listing.** The Shares are registered pursuant to Section 12(b) of the Exchange Act and are listed on the Nasdaq Global Select Market (the “**Nasdaq**”), and the Company has taken no action designed to, or likely to have the effect of, terminating the registration of the Shares under the Exchange Act or delisting the Shares from the Nasdaq, nor has the Company received any notification that the Commission or the Nasdaq is contemplating terminating such registration or listing. To the Company’s knowledge, it is in compliance with all applicable listing requirements of the Nasdaq.

(r) **Non-Contravention of Existing Instruments; No Further Authorizations or Approvals Required.** Neither the Company nor any of its subsidiaries is in violation of its charter or by-laws, partnership agreement or operating agreement or similar organizational documents, as applicable, or is in default (or, with the giving of notice or lapse of time, would be in default) (“**Default**”) under any indenture, mortgage, loan, credit agreement, note, lease, license agreement, contract, franchise or other instrument (including, without limitation, any pledge agreement, security agreement, mortgage or other instrument or agreement evidencing, guaranteeing, securing or relating to indebtedness) to which the Company or any of its subsidiaries is a party or by which it or any of them may be bound, or to which any of their respective properties or assets are subject (each, an “**Existing Instrument**”), except for such Defaults as could not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Change. The Company’s execution, delivery and performance of its obligations under this Agreement, consummation of the transactions contemplated hereby and by the Registration Statement, the Time of Sale Prospectus and the Prospectus and the issuance and sale of the Securities (including the use of proceeds from the sale of the Securities as described in the Registration Statement, the Time of Sale Prospectus and the Prospectus under the caption “Use of Proceeds”) (i) have been duly authorized by all necessary corporate action and will not result in any violation of the provisions of the charter or by-laws, partnership agreement or operating agreement or similar organizational documents, as applicable, of the

Company or any subsidiary, (ii) will not conflict with or constitute a breach of, or Default or a Debt Repayment Triggering Event (as defined below) under, or result in the creation or imposition of any lien, charge or encumbrance upon any property or assets of the Company or any of its subsidiaries pursuant to, or require the consent of any other party to, any Existing Instrument, except as could not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Change, and (iii) will not result in any violation of any law, administrative regulation or administrative or court decree applicable to the Company or any of its subsidiaries. No consent, approval, authorization or other order of, or registration or filing with, any court or other governmental or regulatory authority or agency, is required for the Company's execution, delivery and performance of this Agreement and consummation of the transactions contemplated hereby and by the Registration Statement, the Time of Sale Prospectus and the Prospectus, except such as have been obtained or made by the Company and are in full force and effect under the Securities Act and such as may be required under applicable state securities or blue sky laws or FINRA. As used herein, a "**Debt Repayment Triggering Event**" means any event or condition which gives, or with the giving of notice or lapse of time would give, the holder of any note, debenture or other evidence of indebtedness (or any person acting on such holder's behalf) the right to require the repurchase, redemption or repayment of all or a portion of such indebtedness by the Company or any of its subsidiaries.

(s) **Accuracy of Statements.** The statements set forth or incorporated by reference in the Registration Statement, the Time of Sale Prospectus and the Prospectus under the caption "Description of Capital Stock" insofar as they purport to constitute a summary of the terms of the Shares or to describe the provisions of documents referred to therein, are fair and accurate in all material respects.

(t) **Compliance with Laws.** The Company has not been advised, and has no reason to believe, that it and each of its subsidiaries are not conducting business in compliance with all applicable laws, rules and regulations of the jurisdictions in which each is conducting business, except where failure to be so in compliance would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Change. Except as otherwise disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus, the Company has not received any FDA Form 483, notice of adverse finding, warning letter, untitled letter or other correspondence or notice from the U.S. Food and Drug Administration, the Commission or any other governmental authority alleging or asserting noncompliance with any laws applicable to the Company, except where the failure to be in compliance has not resulted and would not reasonably be expected to result in a Material Adverse Change.

(u) **[Reserved]**

(v) **No Material Actions or Proceedings.** Except as disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus, there is no action, suit, proceeding, inquiry or investigation brought by or before any legal or governmental entity now pending or, to the knowledge of the Company, threatened, against or affecting the Company or any of its subsidiaries, which could reasonably be expected, individually or in the aggregate, to result in a Material Adverse Change or materially and adversely affect the consummation of the transactions contemplated by this Agreement or the performance by the Company of its obligations hereunder; and the aggregate of all pending legal or governmental proceedings to which the Company or any such subsidiary is a party or of which any of their respective properties or assets is the subject, including ordinary routine litigation incidental to the business, if determined adversely to the Company, could not reasonably be expected to result in a Material Adverse Change. No material labor dispute with the employees of the Company or any of its subsidiaries, or to the Company's knowledge with the employees of any principal supplier, manufacturer, customer or contractor of the Company, exists or, to the knowledge of the Company, is threatened or imminent, that if determined adversely would reasonably be expected to result in a Material Adverse Change.

(w) **Intellectual Property Rights.** The Company and its subsidiaries own or possess, or can acquire or license on reasonable terms, sufficient trademarks, trade names, patent rights, copyrights, domain names, licenses, approvals, trade secrets and other similar rights (collectively, “**Intellectual Property Rights**”) reasonably necessary to conduct their businesses as now conducted, except as such failure to own, possess, license, or acquire such Intellectual Property Rights would not result in a Material Adverse Change. Except as would not result, individually or in the aggregate, in a Material Adverse Change, (A) to the knowledge of the Company, there is no infringement, misappropriation or violation by third parties of any of the Intellectual Property Rights owned by the Company; (B) there is no pending or, to the knowledge of the Company, threatened action, suit, proceeding or claim by others challenging the rights of the Company and its subsidiaries in or to any such Intellectual Property Rights, and the Company is unaware of any facts which would form a reasonable basis for any such claim, that would individually, or in the aggregate, together with any other claims in this subsection (w), result in a Material Adverse Change; (C) the Intellectual Property Rights owned by the Company and its subsidiaries and the Intellectual Property Rights licensed to the Company and its subsidiaries have not been adjudged by a court of competent jurisdiction invalid or unenforceable, in whole or in part, and there is no pending or, to the knowledge of the Company, threatened action, suit, proceeding or claim by others challenging the validity or scope of any such Intellectual Property Rights, and the Company is unaware of any facts which would form a reasonable basis for any such claim that would individually, or in the aggregate, together with any other claims in this subsection (w), result in a Material Adverse Change; (D) there is no pending or, to the knowledge of the Company, threatened action, suit, proceeding or claim by others that the Company or its subsidiaries infringe, misappropriate or otherwise violate any Intellectual Property Rights or other similar proprietary rights of others, the Company and its subsidiaries have not received any written notice of such claim and the Company is unaware of any other facts which would form a reasonable basis for any such claim that would individually, or in the aggregate, together with any other claims in this subsection (w), result in a Material Adverse Change; (E) to the knowledge of the Company, there is no prior art that could reasonably be expected to render any patent held by or licensed to the Company or any subsidiary invalid or any U.S. patent application held by or licensed to the Company or any subsidiary unpatentable which prior art was required to be disclosed to the U.S. Patent and Trademark Office during the prosecution of the applicable patent application and which was not so disclosed to the U.S. Patent and Trademark Office, the failure of which to so disclose would individually, or in the aggregate, result in a Material Adverse Change; (F) to the knowledge of the Company, all prior art references relevant to the patentability of any pending claim of any patent applications comprising or that have resulted in Intellectual Property Rights known to the Company, applicable inventor(s) or licensors, or any of their counsel during the prosecution of such patent applications that were required to be disclosed to the relevant patent authority were so disclosed by the required time, except where the failure to so disclose would not individually, or in the aggregate, result in a Material Adverse Change, and, to the knowledge of the Company, neither the Company nor any such inventor, licensor or counsel made any misrepresentation to, or omitted any material fact from, the relevant patent authority during such prosecution, which would individually, or in the aggregate, result in a Material Adverse Change; and (G) to the knowledge of the Company, no employee of the Company or a subsidiary of the Company is in or has ever been in violation in any material respect of any term of any employment contract, patent disclosure agreement, invention assignment agreement, non-competition agreement, non-solicitation agreement, nondisclosure agreement or any restrictive covenant to or with a former employer where the basis of such violation relates to such employee’s employment with the Company or a subsidiary of the Company, or actions undertaken by the employee while employed with the Company or a subsidiary of the Company and would reasonably be expected to result, individually or in the aggregate, in a Material Adverse Change. To the knowledge of the Company, except to the extent any technical information has been published or submitted for publication, all material technical information developed by and belonging to the Company and its subsidiaries for which they have not sought, and do not intend to seek, to patent or otherwise protect pursuant to applicable intellectual property laws has been kept confidential or has been disclosed only under obligations of confidentiality. The Company is not a party to or bound by any options, licenses or agreements with

respect to the Intellectual Property Rights of any other person or entity that are required to be set forth in the Registration Statement, the Time of Sale Prospectus, Prospectus or any documents incorporated by reference therein and that are not described in all material respects therein. To the Company's knowledge, none of the technology employed by the Company or any of its subsidiaries has been obtained or is being used by the Company or any of its subsidiaries in violation of any contractual obligation binding on the Company or any of its subsidiaries or any of its or its subsidiaries' officers, directors or employees or otherwise in violation of the rights of any persons, except in each case for such violations that would not reasonably be expected to result in a Material Adverse Change.

(x) **All Necessary Permits, etc.** The Company and its subsidiaries possess such valid and current certificates, authorizations or permits required by the appropriate state, federal or foreign regulatory agencies or bodies necessary to conduct their respective businesses as currently conducted and as described in the Registration Statement, the Time of Sale Prospectus or the Prospectus (collectively, "**Permits**"), except for any Permits for which the failure to so possess would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Change. Neither the Company nor any of its subsidiaries is in violation of, or in default under, any of the Permits or has received, or has any reason to believe that it will receive, any notice of proceedings relating to the revocation or modification of, or non-compliance with, any such certificate, authorization or permit which, individually or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would reasonably be expected to result in a Material Adverse Change.

(y) **Title to Properties.** Except as otherwise disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus, the Company and its subsidiaries have good and marketable title to all of the real and personal property and other assets reflected as owned in the financial statements referred to in Section 1(A)(k) above (or elsewhere in the Registration Statement, the Time of Sale Prospectus or the Prospectus), in each case free and clear of any security interests, mortgages, liens, encumbrances, equities, adverse claims and other defects, except as do not materially and adversely affect the value of such property and do not materially interfere with the use made, or proposed to be made, of such property by the Company or such subsidiary. The real property, improvements, equipment and personal property held under lease by the Company or any of its subsidiaries are held under valid and enforceable leases, with such exceptions as are not material and do not materially interfere with the use made, or proposed to be made, of such real property, improvements, equipment or personal property by the Company or such subsidiary.

(z) **Tax Law Compliance.** The Company and its consolidated subsidiaries have filed all necessary federal, state and foreign income and franchise tax returns or have properly requested extensions thereof and have paid all material taxes required to be paid by any of them and, if due and payable, any related or similar assessment, fine or penalty levied against any of them except as may be being contested in good faith and by appropriate proceedings. The Company has made adequate charges, accruals and reserves in the applicable financial statements referred to in Section 1(A)(k) above in respect of all federal, state and foreign income and franchise taxes for all periods as to which the tax liability of the Company or any of its consolidated subsidiaries has not been finally determined.

(aa) **Company Not an "Investment Company."** The Company has been advised of the rules and requirements under the Investment Company Act of 1940, as amended (the "**Investment Company Act**"). The Company is not, and will not be, either after receipt of payment for the Securities or after the application of the proceeds therefrom as described under "Use of Proceeds" in the Registration Statement, the Time of Sale Prospectus or the Prospectus, required to register as an "investment company" within the meaning of the Investment Company Act and will conduct its business in a manner so that it will not become subject to the Investment Company Act.

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

(cc) **Compliance with Environmental Laws.** Except as otherwise disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus, and except as would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Change: (i) 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 (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**”); (ii) 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; (iii) 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 (iv) 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.

(dd) **Periodic Review of Costs of Environmental Compliance.** In the ordinary course of its business, the Company conducts a periodic review of the effect of Environmental Laws on the business, operations and properties of the Company and its subsidiaries, in the course of which it identifies and evaluates associated costs and liabilities (including, without limitation, any capital or operating expenditures required for clean-up, closure of properties or compliance with Environmental Laws or any permit, license or approval, any related constraints on operating activities and any potential liabilities to third parties). On the basis of such review and the amount of its established reserves, the Company has reasonably concluded that such associated costs and liabilities would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Change.

(ee) **ERISA Compliance.** The Company and its subsidiaries and any “employee benefit plan” (as defined under the Employee Retirement Income Security Act of 1974, as amended, and the regulations and published interpretations thereunder (collectively, “**ERISA**”)) established or maintained by the Company, its subsidiaries or their “ERISA Affiliates” (as defined below) are in compliance in all material respects with ERISA. “**ERISA Affiliate**” means, with respect to the Company or any of its subsidiaries, any member of any group of organizations described in Sections 414(b), (c), (m) or (o) of the Internal

Revenue Code of 1986, as amended, and the regulations and published interpretations thereunder (the “Code”) of which the Company or such subsidiary is a member. No “reportable event” (as defined under ERISA) has occurred or is reasonably expected to occur with respect to any “employee benefit plan” established or maintained by the Company, its subsidiaries or any of their ERISA Affiliates. No “employee benefit plan” established or maintained by the Company, its subsidiaries or any of their ERISA Affiliates, if such “employee benefit plan” were terminated, would have any “amount of unfunded benefit liabilities” (as defined under ERISA). Neither the Company, its subsidiaries nor any of their ERISA Affiliates has incurred or reasonably expects to incur any liability under (i) Title IV of ERISA with respect to termination of, or withdrawal from, any “employee benefit plan” or (ii) Sections 412, 4971, 4975 or 4980B of the Code. Each employee benefit plan established or maintained by the Company, its subsidiaries or any of their ERISA Affiliates that is intended to be qualified under Section 401(a) of the Code is so qualified and nothing has occurred, whether by action or failure to act, which would cause the loss of such qualification.

(ff) **No Price Stabilization or Manipulation; Compliance with Regulation M.** Neither the Company nor any of its subsidiaries has taken, directly or indirectly, any action designed to or that might be reasonably expected to cause or result in stabilization or manipulation of the price of the Shares or any “reference security” (as defined in Rule 100 of Regulation M under the Exchange Act (“**Regulation M**”)) with respect to the Shares, whether to facilitate the sale or resale of the Securities or otherwise, and has taken no action which would directly or indirectly violate Regulation M.

(gg) **Related-Party Transactions.** There are no business relationships or related-party transactions involving the Company or any of its subsidiaries or any other person required to be described in the Registration Statement, the Time of Sale Prospectus or the Prospectus that have not been described as required.

(hh) **FINRA Matters.** All of the information provided to the Underwriters or to counsel for the Underwriters by the Company, its counsel, its officers and directors and the holders of any securities (debt or equity) or options to acquire any securities of the Company in connection with the Offering is true, complete, correct and compliant with FINRA’s rules and any letters, filings or other supplemental information provided to FINRA pursuant to FINRA Rules or NASD Conduct Rules is true, complete and correct.

(ii) **Parties to Lock-Up Agreements.** The Company has furnished to the Underwriters a letter agreement in the form attached hereto as Exhibit B (the “**Lock-up Agreement**”) from each of the persons listed on Exhibit C. Such Exhibit C lists under an appropriate caption the directors and executive officers of the Company. If any additional persons shall become directors or executive officers of the Company prior to the end of the Company Lock-up Period (as defined below), the Company shall cause each such person, prior to or contemporaneously with their appointment or election as a director or executive officer of the Company, to execute and deliver to the Representatives a Lock-up Agreement.

(jj) **Statistical and Market-Related Data.** All statistical, demographic and market-related data included in the Registration Statement, the Time of Sale Prospectus or the Prospectus are based on or derived from sources that the Company believes to be reliable and accurate in all material respects. To the extent required, the Company has obtained the consent to the use of such data from such sources.

(kk) **No Unlawful Contributions or Other Payments.** Neither the Company nor any of its subsidiaries nor, to the Company’s knowledge, any employee or agent of the Company or any subsidiary, has made any contribution or other payment to any official of, or candidate for, any federal, state or foreign office in violation of any law or of the character required to be disclosed in the Registration Statement, the Time of Sale Prospectus or the Prospectus.

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

(mm) **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, the “**Money Laundering Laws**”) and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any of its subsidiaries with respect to the Money Laundering Laws is pending or, to the best knowledge of the Company, threatened.

(nn) **Sanctions.** 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 the subject of any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Department of the Treasury (“**OFAC**”) or the U.S. Department of State, the United Nations Security Council, the European Union, Her Majesty’s Treasury of the United Kingdom or other relevant sanctions authority (collectively, “**Sanctions**”); nor is the Company or any of its subsidiaries located, organized or resident in a country or territory that is the subject of Sanctions, including, without limitation, Crimea, Cuba, Iran, North Korea, and Syria (each, a “**Sanctioned Country**”); the Company will not directly or indirectly use the proceeds of the Offering, or lend, contribute or otherwise make available such proceeds to any subsidiary, or any joint venture partner or other person or entity, for the purpose of financing the activities of or business with any person, or in any country or territory, that at the time of such financing, is the subject or the target of Sanctions or in any other manner that will result in a violation by any person (including any person participating in the transaction whether as underwriter, advisor, investor or otherwise) of applicable Sanctions. For the past five years, the Company and its subsidiaries have not knowingly engaged in and are not now knowingly engaged in any dealings or transactions with any person that at the time of the dealing or transaction is or was the subject of Sanctions or with any Sanctioned Country.

(oo) **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 applicable provision of the Sarbanes-Oxley Act of 2002, as amended and the rules and regulations promulgated in connection therewith, including Section 402 related to loans and Sections 302 and 906 related to certifications.

(pp) **No Brokers.** Except pursuant to this Agreement, there is no 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 transactions contemplated by this Agreement.

(qq) **Forward-Looking Statements.** Each financial or operational projection or other "forward-looking statement" (as defined by Section 27A of the Securities Act or Section 21E of the Exchange Act) contained in the Registration Statement, the Time of Sale Prospectus or the Prospectus (i) was so included by the Company in good faith and with reasonable basis after due consideration by the Company of the underlying assumptions, estimates and other applicable facts and circumstances and (ii) is accompanied by meaningful cautionary statements identifying those factors that could cause actual results to differ materially from those in such forward-looking statement. No such statement was made with the knowledge of an executive officer or director of the Company that it was false or misleading.

(rr) **[Reserved]**

(ss) **Clinical Data and Regulatory Compliance.** The studies, tests and preclinical and clinical trials conducted by or on behalf of the Company and its subsidiaries were and, if still pending, are being conducted in compliance with experimental protocols, procedures and controls pursuant to accepted professional scientific standards and all applicable laws and authorizations, including, without limitation, the Federal Food, Drug and Cosmetic Act and the rules and regulations promulgated thereunder, except where the failure to be in compliance has not resulted and would not reasonably be expected to result in a Material Adverse Change; the descriptions of the results of such studies, tests and trials contained in the Registration Statement, the Time of Sale Prospectus and the Prospectus are accurate and complete in all material respects and fairly present the data derived from such studies, tests and trials; the Company is not aware of any studies, tests or trials, the results of which the Company believes reasonably call into question the study, test, or trial results described or referred to in the Registration Statement, the Time of Sale Prospectus and the Prospectus when viewed in the context in which such results are described and the clinical state of development; and the Company and its subsidiaries have not received any notices or correspondence from any applicable governmental authority requiring the termination, suspension or material modification of any studies, tests or preclinical or clinical trials conducted by or on behalf of the Company or its subsidiaries.

(tt) **Medicare and Medicaid Programs.** To the extent required in connection with their respective businesses, each of the Company and its subsidiaries has the requisite provider number or other authorization to bill the Medicare program and the respective Medicaid program in the state or states in which such entity operates unless failure to maintain such provider number or other authorization could not be expected, individually or in the aggregate, to result in a Material Adverse Change; neither the Company nor any of its subsidiaries is subject to any pending or, to the Company's knowledge, threatened or contemplated action which could reasonably be expected to result either in a revocation of any provider number or authorization or in the Company's or any subsidiary's exclusion from the Medicare or any state Medicaid programs; the Company's and each of its subsidiaries' business practices have been structured in a manner reasonably designed to comply with the federal or state laws governing Medicare and state Medicaid programs, including, without limitation, Sections 1320a-7a and 1320a-7b of Title 42 of the United States Code, and the Company reasonably believes that it is in compliance with such laws; the Company and its subsidiaries have taken reasonable actions designed to ensure that they do not: (i) violate the False Claims Act, 31 U.S.C. §§ 3729-3733 or (ii) allow any individual with an ownership or control interest (as defined in 42 U.S.C. § 1320a-3(a)(3)) in the Company or any of its subsidiary or have any officer, director or managing employee (as defined in 42 U.S.C. § 1320a-5(b)) of the Company or any of its subsidiaries who would be a person excluded from participation in any federal health care program (as defined in 42 U.S.C. § 1320a-7b(f)) as described in 42 U.S.C. § 1320a-7(b)(8); and the Company and its subsidiaries have structured their respective businesses practices in a manner reasonably designed to

comply with the federal and state laws regarding physician ownership of (or financial relationship with), and referral to, entities providing healthcare-related goods or services, and with laws requiring disclosure of financial interests held by physicians in entities to which they may refer patients for the provisions of healthcare-related goods or services, and the Company reasonably believes that it and its subsidiaries are in compliance with such laws.

(uu) Dividend Restrictions. Except as disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus, no subsidiary of the Company is prohibited or restricted, directly or indirectly, from paying dividends to the Company, or from making any other distribution with respect to such subsidiary's equity securities or from repaying to the Company or any other subsidiary of the Company any amounts that may from time to time become due under any loans or advances to such subsidiary from the Company or from transferring any property or assets to the Company or to any other subsidiary.

(vv) No Outstanding Loans or Other Extensions of Credit. Since the adoption of Section 13(k) of the Exchange Act, neither the Company nor any of its subsidiaries has extended or maintained credit, arranged for the extension of credit, or renewed any extension of credit, in the form of a personal loan, to or for any director or executive officer (or equivalent thereof) of the Company and/or such subsidiary except for such extensions of credit as are expressly permitted by Section 13(k) of the Exchange Act.

(ww) Rating Agencies. No "nationally recognized statistical rating organization" (as defined in Section 3(a)(62) under the Securities Act) (i) has imposed (or has informed the Company that it is considering imposing) any condition (financial or otherwise) to retain any rating assigned to the Company or any of the subsidiaries or to any securities of the Company or any of the subsidiaries or (ii) has indicated to the Company that it is considering (A) the downgrading, suspension, or withdrawal of, or any review (or of any potential or intended review) for a possible change in, any rating so assigned (including, without limitation, the placing of any of the foregoing ratings on credit watch with negative or developing implications or under review with an uncertain direction) or (B) any change in the outlook for any rating of the Company or any of the subsidiaries or any securities of the Company or any of the subsidiaries.

(xx) Margin Requirements. None of the transactions contemplated by this Agreement, the Registration Statement, the Time of Sale Prospectus or the Prospectus or the application of the proceeds of the Securities will violate or result in a violation of Section 7 of the Exchange Act (including, without limitation, Regulation T (12 C.F.R. Part 220), Regulation U (12 C.F.R. Part 221) or Regulation X (12 C.F.R. Part 224) of the Board of Governors of the Federal Reserve System).

(yy) Cybersecurity. The Company and its subsidiaries' information technology assets and equipment, computers, systems, networks, hardware, software, websites, applications, and databases (collectively, "**IT Systems**") are adequate for, and operate and perform in all material respects as required in connection with the operation of the business of the Company and its subsidiaries as currently conducted, free and clear of all material bugs, errors, defects, Trojan horses, time bombs, malware and other corruptants. The Company and its subsidiaries have implemented and maintained commercially reasonable physical, technical and administrative controls, policies, procedures, and safeguards to maintain and protect their material confidential information and the integrity, continuous operation, redundancy and security of all material IT Systems and data, including "Personal Data," used in connection with their businesses. "**Personal Data**" means (i) a natural person's name, street address, telephone number, e-mail address, photograph, social security number or tax identification number, driver's license number, passport number, credit card number, bank information, or customer or account number; (ii) any information which would qualify as "personally identifying information" under the Federal Trade Commission Act, as amended; (iii) "personal data" as defined by GDPR (as defined below); (iv) any information which would

qualify as “protected health information” under the Health Insurance Portability and Accountability Act of 1996, as amended by the Health Information Technology for Economic and Clinical Health Act (collectively, “**HIPAA**”); and (v) any other piece of information that allows the identification of such natural person, or his or her family. Except as disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus, there have been no breaches, violations, outages or unauthorized uses of or accesses to same, except for those that have been remedied without material cost or liability. Except as could not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Change, the Company and its subsidiaries are presently in material compliance with all applicable laws or statutes and all judgments, orders, rules and regulations of any court or arbitrator or governmental or regulatory authority, internal policies and contractual obligations relating to the privacy and security of IT Systems and Personal Data and to the protection of such IT Systems and Personal Data from unauthorized use, access, misappropriation or modification.

(zz) Compliance with Data Privacy Laws. The Company and its subsidiaries are, and within the last five years were, in material compliance with all applicable state and federal data privacy and security laws and regulations, including without limitation HIPAA, and the Company and its subsidiaries have taken commercially reasonable actions to prepare to comply with, and since May 25, 2018, have been and currently are in compliance in all material respects with, the European Union General Data Protection Regulation (“**GDPR**”) (EU 2016/679) (collectively, the “**Privacy Laws**”). The Company and its subsidiaries have in place, and have complied with, commercially reasonable policies and procedures relating to data privacy and security and the collection, storage, use, disclosure, handling, and analysis of Personal Data (the “**Policies**”). Except as could not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Change, the Company and its subsidiaries have at all times made all disclosures to users or customers required by applicable laws and regulatory rules or requirements. The Company further represents and warrants that, except as disclosed in the Registration Statement, the Time of Sale Prospectus and the Prospectus or except as could not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Change, neither it nor any subsidiary: (i) has received notice of any actual or potential liability under or relating to, or actual or potential violation of, any of the Privacy Laws, and has no knowledge of any event or condition that would reasonably be expected to result in any such notice; or (ii) is currently conducting or paying for, in whole or in part, any investigation, remediation, or other corrective action pursuant to any Privacy Law.

(aaa) Certificates. Any certificate signed by any officer of the Company or any of its subsidiaries and delivered to the Underwriters or to counsel for the Underwriters in connection with the Offering of the Securities shall be deemed a representation and warranty by the Company to the Underwriters as to the matters covered thereby.

(bbb) Acknowledgement. The Company acknowledges that the Underwriters and, for purposes of the opinions to be delivered pursuant to Section 6 hereof, counsel to the Company and counsel to the Underwriters, will rely upon the accuracy and truthfulness of the foregoing representations and hereby consents to such reliance.

Section 2. Purchase, Sale and Delivery of the Securities.

(a) The Firm Shares. On the basis of the representations, warranties, agreements and covenants herein contained and subject to the terms and conditions herein set forth, the Company agrees to issue and sell to the several Underwriters an aggregate of 50,000,000 Firm Shares. On the basis of the representations, warranties and agreements herein contained, and upon the terms but subject to the conditions herein set forth, the Underwriters agree, severally and not jointly, to purchase from the Company the respective number of Firm Shares set forth opposite their names on Schedule A. The purchase price per Firm Share to be paid by the several Underwriters to the Company shall be \$1.4175.

(a) **The First Closing Date.** Delivery of certificates (as evidence of book-entry transfer) for the Firm Shares to be purchased by the Underwriters and payment therefor shall be made at the offices of Skadden, Arps, Slate, Meagher & Flom, LLP, located at Four Times Square, New York, New York 10036 (or such other place as shall be reasonably acceptable to the Representatives) at 9:00 a.m. New York City time, on October 29, 2019, or such other time and date as the Representatives shall designate by notice to the Company (the time and date of such closing are called the “**First Closing Date**”). The Company hereby acknowledges that circumstances under which the Representatives may provide notice to postpone the First Closing Date as originally scheduled include, but are not limited to, any determination by the Company or the Representatives to recirculate to the public copies of an amended or supplemented Prospectus or a delay as contemplated by the provisions of Sections 11 and 18.

(b) **The Optional Shares; Option Closing Date.** In addition, on the basis of the representations, warranties and agreements herein contained, and upon the terms but subject to the conditions herein set forth, the Company hereby grants an option to the several Underwriters to purchase, severally and not jointly, up to an aggregate of 7,500,000 Optional Shares from the Company at the purchase price per share to be paid by the Underwriters for the Firm Shares, less an amount per share equal to any dividend or distribution declared by the Company and payable on the Firm Shares but not payable on Optional Shares. The option granted hereunder may be exercised at any time and from time to time in whole or in part upon notice by the Representatives to the Company, which notice may be given at any time within 30 days immediately following the date of this Agreement. Such notice shall set forth (i) the aggregate number of Optional Shares as to which the Underwriters are exercising the option and (ii) the time, date and place at which certificates (as evidence of book-entry transfer) for the Optional Shares will be delivered (which time and date may be simultaneous with, but not earlier than, the First Closing Date; and in the event that such time and date are simultaneous with the First Closing Date, the term “First Closing Date” shall refer to the time and date of delivery of certificates (as evidence of book-entry transfer) for the Firm Shares and such Optional Shares). Any such time and date of delivery, if subsequent to the First Closing Date, is called an “**Option Closing Date**,” and shall be determined by the Representatives and shall not be earlier than two or later than five full business days after delivery of such notice of exercise. If any Optional Shares are to be purchased, each Underwriter agrees, severally and not jointly, to purchase the number of Optional Shares (subject to such adjustments to eliminate fractional shares as the Representatives may determine) that bears the same proportion to the total number of Optional Shares to be purchased as the number of Firm Shares set forth on Schedule A opposite the name of such Underwriter bears to the total number of Firm Shares, and the Company agrees to sell the number of Optional Shares (subject to such adjustments to eliminate fractional shares as the Representatives may determine) that bears the same proportion to the total number of Optional Shares to be sold as the number of Optional Shares to be sold by the Company as set forth in the paragraph “Introductory” of this Agreement). The Representatives may cancel the option at any time prior to its expiration by giving written notice of such cancellation to the Company.

(c) **Public Offering of the Securities.** The Representatives hereby advise the Company that the Underwriters intend to offer for sale to the public, initially on the terms set forth in the Registration Statement, the Time of Sale Prospectus and the Prospectus, their respective portions of the Securities as soon after this Agreement has been executed by all parties as the Representatives, in their sole judgment, has determined is advisable and practicable.

(d) **Payment for the Securities.** (i) Payment for the Securities shall be made at the First Closing Date (and, if applicable, at each Option Closing Date) by wire transfer of immediately available funds to the order of the Company.

(ii) It is understood and agreed that the Representatives have been authorized, for their own accounts and the accounts of the several Underwriters, to accept delivery of and receipt for, and

make payment of the purchase price for, the Firm Shares and any Optional Shares the Underwriters have agreed to purchase. Each of Jefferies, Piper Jaffray and Guggenheim, individually and not as the Representatives of the Underwriters, may (but shall not be obligated to) make payment for any Securities to be purchased by any Underwriter whose funds shall not have been received by the Representatives by the First Closing Date or the applicable Option Closing Date, as the case may be, for the account of such Underwriter, but any such payment shall not relieve such Underwriter from any of its obligations under this Agreement.

(e) **Delivery.** The Company shall deliver, or cause to be delivered to the Representatives for the accounts of the several Underwriters certificates (as evidence of book-entry transfer) for the Firm Shares at the First Closing Date, against release of a wire transfer to the Company of immediately available funds for the amount of the purchase price therefor. The Company shall also deliver, or cause to be delivered to the Representatives for the accounts of the several Underwriters, certificates (as evidence of book-entry transfer) for the Optional Shares the Underwriters have agreed to purchase at the First Closing Date or the applicable Option Closing Date, as the case may be, against the release of a wire transfer to the Company of immediately available funds for the amount of the purchase price therefor. If Jefferies so elects, delivery of the Securities may be made by credit to the accounts designated by Jefferies through The Depository Trust Company's full fast transfer or DWAC programs. If Jefferies so elects, the certificates for the Securities shall be registered in such names and denominations as the Representatives shall have requested at least two full business days prior to the First Closing Date (or the applicable Option Closing Date, as the case may be) and shall be made available for inspection on the business day preceding the First Closing Date (or the applicable Option Closing Date, as the case may be) at a location in New York City as the Representatives may designate. Time shall be of the essence, and delivery at the time and place specified in this Agreement is a further condition to the obligations of the Underwriters.

Section 3. Additional Covenants of the Company.

A. Covenants of the Company. The Company further covenants and agrees with the Underwriters as follows:

(a) **Commission Filing Fees.** The Company agrees to pay the required Commission filing fees relating to the Securities within the time required by Rule 456(b)(1) under the Securities Act without regard to the proviso therein and otherwise in accordance with the Rules 456(b) and 457(r) under the Securities Act.

(b) **Delivery of Registration Statement, Time of Sale Prospectus and Prospectus.** The Company shall furnish to you in New York City, without charge, prior to 10:00 a.m. New York City time on the business day next succeeding the date of this Agreement and during the period when a prospectus relating to the Securities is required by the Securities Act to be delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule) in connection with sales of the Securities, as many copies of the Time of Sale Prospectus, the Prospectus and any supplements and amendments thereto or to the Registration Statement as you may reasonably request.

(c) **Representatives' Review of Proposed Amendments and Supplements.** During the period when a prospectus relating to the Securities is required by the Securities Act to be delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule), the Company (i) will furnish to the Representatives for review, a reasonable period of time prior to the proposed time of filing of any proposed amendment or supplement to the Registration Statement, a copy of each such amendment or supplement and (ii) will not amend or supplement the Registration Statement (including any amendment or supplement through incorporation of any report filed under the Exchange Act) without the Representatives' prior written consent, such consent not to be unreasonably withheld.

Prior to amending or supplementing any preliminary prospectus, the Time of Sale Prospectus or the Prospectus (including any amendment or supplement through incorporation of any report filed under the Exchange Act), the Company shall furnish to the Representatives for review, a reasonable amount of time prior to the time of filing or use of the proposed amendment or supplement, a copy of each such proposed amendment or supplement. The Company shall not file or use any such proposed amendment or supplement without the Representatives' prior written consent, such consent not to be unreasonably withheld. The Company shall file with the Commission within the applicable period specified in Rule 424(b) under the Securities Act any prospectus required to be filed pursuant to such Rule.

(d) Free Writing Prospectuses. The Company shall furnish to the Representatives for review, a reasonable amount of time prior to the proposed time of filing or use thereof, a copy of each proposed free writing prospectus or any amendment or supplement thereto prepared by or on behalf of, used by, or referred to by the Company, and the Company shall not file, use or refer to any proposed free writing prospectus or any amendment or supplement thereto without the Representatives' prior written consent, such consent not to be unreasonably withheld. The Company shall furnish to each Underwriter, without charge, as many copies of any free writing prospectus prepared by or on behalf of, used by or referred to by the Company as such Underwriter may reasonably request. If at any time when a prospectus is required by the Securities Act to be delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule) in connection with sales of the Securities (but in any event if at any time through and including the First Closing Date) there occurred or occurs an event or development as a result of which any free writing prospectus prepared by or on behalf of, used by, or referred to by the Company conflicted or would conflict with the information contained in the Registration Statement or included or would include an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances prevailing at such time, not misleading, the Company shall promptly amend or supplement such free writing prospectus to eliminate or correct such conflict or so that the statements in such free writing prospectus as so amended or supplemented 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 prevailing at such time, not misleading, as the case may be; *provided, however*, that prior to amending or supplementing any such free writing prospectus, the Company shall furnish to the Representatives for review, a reasonable amount of time prior to the proposed time of filing or use thereof, a copy of such proposed amended or supplemented free writing prospectus, and the Company shall not file, use or refer to any such amended or supplemented free writing prospectus without the Representatives' prior written consent, such consent not to be unreasonably withheld.

(e) Filing of Underwriter Free Writing Prospectuses. The Company shall not take any action that would result in an Underwriter or the Company being required to file with the Commission pursuant to Rule 433(d) under the Securities Act a free writing prospectus prepared by or on behalf of such Underwriter that such Underwriter otherwise would not have been required to file thereunder.

(f) Amendments and Supplements to Time of Sale Prospectus If the Time of Sale Prospectus is being used to solicit offers to buy the Securities at a time when the Prospectus is not yet available to prospective purchasers, and any event shall occur or condition exist as a result of which it is necessary to amend or supplement the Time of Sale Prospectus so that the Time of Sale Prospectus does 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 when delivered to a prospective purchaser, not misleading, or if any event shall occur or condition exist as a result of which the Time of Sale Prospectus conflicts with the information contained in the Registration Statement, or if, in the opinion of counsel for the Underwriters, it is necessary to amend or supplement the Time of Sale Prospectus to comply with applicable law, the Company shall (subject to Section 3(A)(c) and Section 3(A)(d) hereof) promptly prepare, file with the Commission and furnish, at its own expense, to the Underwriters and to any dealer

upon request, either amendments or supplements to the Time of Sale Prospectus so that the statements in the Time of Sale Prospectus as so amended or supplemented 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 when delivered to a prospective purchaser, not misleading or so that the Time of Sale Prospectus, as amended or supplemented, will no longer conflict with the information contained in the Registration Statement, or so that the Time of Sale Prospectus, as amended or supplemented, will comply with applicable law.

(g) *Certain Notifications and Required Actions* After the date of this Agreement and until such time as the Underwriters are no longer required to deliver a Prospectus in order to confirm sales of the Securities, the Company shall promptly advise the Representatives in writing of: (i) the receipt of any comments of, or requests for additional or supplemental information from, the Commission; (ii) the time and date of any filing of any post-effective amendment to the Registration Statement or any amendment or supplement to any preliminary prospectus, the Time of Sale Prospectus, any free writing prospectus or the Prospectus; (iii) the time and date that any post-effective amendment to the Registration Statement becomes effective; and (iv) the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or any post-effective amendment thereto or any amendment or supplement to any preliminary prospectus, the Time of Sale Prospectus or the Prospectus or of any order preventing or suspending the use of any preliminary prospectus, the Time of Sale Prospectus, any free writing prospectus or the Prospectus, or of any proceedings to remove, suspend or terminate from listing or quotation the Shares from any securities exchange upon which they are listed for trading or included or designated for quotation, or of the threatening or initiation of any proceedings for any of such purposes. If the Commission shall enter any such stop order at any time, the Company will use its best efforts to obtain the lifting of such order at the earliest possible moment. Additionally, the Company agrees that it shall comply with all applicable provisions of Rule 424(b), Rule 433 and Rule 430B under the Securities Act and will use its reasonable efforts to confirm that any filings made by the Company under Rule 424(b) or Rule 433 were received in a timely manner by the Commission. If, after the date of this Agreement and during any time when a prospectus is required by the Securities Act to be delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule), the Company receives notice pursuant to Rule 401(g)(2) under the Securities Act from the Commission or otherwise ceases to be eligible to use the automatic shelf registration form, the Company shall promptly advise the Underwriters in writing of such notice or ineligibility and will (i) promptly file a new registration statement or post-effective amendment on the proper form relating to the Securities, (ii) use its best efforts to cause such registration statement or post-effective amendment to be declared effective by the Commission as soon as practicable and (iii) promptly notify the Underwriters in writing of such effectiveness.

(h) *Amendments and Supplements to the Prospectus and Other Securities Act Matters* If any event shall occur or condition exist as a result of which it is necessary to amend or supplement the Prospectus so that the Prospectus does 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 when the Prospectus is delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule) to a purchaser, not misleading, or if in the opinion of the Representatives or counsel for the Underwriters it is otherwise necessary to amend or supplement the Prospectus to comply with applicable law, the Company agrees (subject to Section 3(A)(c) and Section 3(A)(d) hereof) to promptly prepare, file with the Commission and furnish, at its own expense, to the Underwriters and to any dealer upon request, amendments or supplements to the Prospectus so that the statements in the Prospectus as so amended or supplemented 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 when the Prospectus is delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule) to a purchaser, not misleading or so that the Prospectus, as amended or supplemented, will comply with applicable law. Neither the Representatives' consent to, nor delivery of, any such amendment or supplement shall constitute a waiver of any of the Company's obligations under Section 3(A)(c) or Section 3(A)(d).

(i) **Blue Sky Compliance.** The Company shall cooperate with the Representatives and counsel for the Underwriters to qualify or register the Securities for sale under (or obtain exemptions from the application of) the state securities or blue sky laws of those jurisdictions designated by the Representatives, shall comply with such laws and shall continue such qualifications, registrations and exemptions in effect so long as required for the distribution of the Securities. The Company shall not be required to qualify as a foreign corporation or to take any action that would subject it to general service of process in any such jurisdiction where it is not presently qualified or where it would be subject to taxation as a foreign corporation. The Company will advise the Representatives promptly of the suspension of the qualification or registration of (or any such exemption relating to) the Securities for offering, sale or trading in any jurisdiction or any initiation or threat of any proceeding for any such purpose, and in the event of the issuance of any order suspending such qualification, registration or exemption, the Company shall use its best efforts to obtain the withdrawal thereof at the earliest possible moment.

(j) **Use of Proceeds.** The Company shall apply the net proceeds from the sale of the Securities sold by it in the manner described under the caption "Use of Proceeds" in the Registration Statement, the Time of Sale Prospectus and the Prospectus.

(k) **Transfer Agent.** The Company shall engage and maintain, at its expense, a registrar and transfer agent for the Shares.

(l) **Earnings Statement.** The Company will make generally available to its security holders and to the Representatives an earnings statement (which need not be audited) covering a period of at least twelve months beginning with the first fiscal quarter of the Company commencing after the date of this Agreement that will satisfy the provisions of Section 11(a) of the Securities Act and the rules and regulations of the Commission thereunder.

(m) **Continued Compliance with Securities Laws.** The Company will comply with the Securities Act and the Exchange Act so as to permit the completion of the distribution of the Securities as contemplated by this Agreement, the Registration Statement, the Time of Sale Prospectus and the Prospectus. Without limiting the generality of the foregoing, the Company will, during the period when a prospectus relating to the Securities is required by the Securities Act to be delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule), file on a timely basis with the Commission and the Nasdaq all reports and documents required to be filed under the Exchange Act.

(n) **Listing.** The Company will use its commercially reasonable efforts to effect and maintain the listing of the Shares on the Nasdaq.

(o) **Agreement Not to Offer or Sell Additional Shares** During the period commencing on and including the date hereof and continuing through and including the 60th day following the date of the Prospectus (such period, as extended as described below, being referred to herein as the **'Lock-up Period'**), the Company will not, without the prior written consent of Jefferies and Piper Jaffray (which consent may be withheld in their sole discretion), directly or indirectly: (i) sell, offer to sell, contract to sell or lend any Shares or Related Securities (as defined below); (ii) effect any short sale, or establish or increase any "put equivalent position" (as defined in Rule 16a-1(h) under the Exchange Act) or liquidate or decrease any "call equivalent position" (as defined in Rule 16a-1(b) under the Exchange Act) of any Shares or Related Securities; (iii) pledge, hypothecate or grant any security interest in any Shares or Related Securities; (iv) in any other way transfer or dispose of any Shares or Related Securities; (v) enter into any swap, hedge or similar arrangement or agreement that transfers, in whole or in part, the economic

risk of ownership of any Shares or Related Securities, regardless of whether any such transaction is to be settled in securities, in cash or otherwise; (vi) announce the offering of any Shares or Related Securities; (vii) file any registration statement under the Securities Act in respect of any Shares or Related Securities (other than as contemplated by this Agreement with respect to the Securities); or (viii) publicly announce the intention to do any of the foregoing. The foregoing sentence shall not apply to (A) the Securities to be sold hereunder, (B) any Shares issued by the Company upon the exercise of an option or warrant or the conversion of a security outstanding on the date hereof and referred to in the Registration Statement, Time of Sale Prospectus and Prospectus, (C) any Shares issued or options to purchase Shares granted pursuant to existing employee benefit plans of the Company referred to in the Registration Statement, Time of Sale Prospectus and Prospectus, (D) any Shares issued pursuant to any non-employee director stock plan or dividend reinvestment plan referred to in the Registration Statement, Time of Sale Prospectus and Prospectus, (E) any Shares or any securities convertible into or exercisable or exchangeable for Shares issued in connection with acquisitions, joint ventures and similar types of arrangements of up to 5% of outstanding Shares in aggregate at the time of the Agreement, as long as, solely with respect to this clause (E), the recipients of such securities also agree not to sell or transfer those securities without the prior written consent of Jefferies and Piper Jaffray for a period of 60 days from the date of the Prospectus, (F) the establishment of a trading plan pursuant to Rule 10b5-1 under the Exchange Act, provided that (x) no public announcement or filing is voluntarily made or required regarding such plan during the Lock-Up Period and (y) no Shares or Related Securities are sold pursuant to such plan during the Lock-Up Period, and (G) up to 644,330 Shares that may be issuable to the sellers of Claros Diagnostics Inc. in connection with the approval of the Sangia Total PSA Test using the Claros Analyzer as described in the Time of Sale Prospectus. For purposes of the foregoing, “**Related Securities**” shall mean any options or warrants or other rights to acquire Shares or any securities exchangeable or exercisable for or convertible into Shares, or to acquire other securities or rights ultimately exchangeable or exercisable for, or convertible into, Shares.

(p) **Investment Limitation.** The Company shall not invest or otherwise use the proceeds received by the Company from its sale of the Securities in such a manner as would require the Company or any of its subsidiaries to register as an investment company under the Investment Company Act.

(q) **No Stabilization or Manipulation; Compliance with Regulation M.** The Company will not take, and will ensure that no controlled affiliate of the Company will take, directly or indirectly, any action designed to or that might cause or result in stabilization or manipulation of the price of the Shares or any reference security with respect to the Shares, whether to facilitate the sale or resale of the Securities or otherwise, and the Company will, and shall cause each of its controlled affiliates to, comply with all applicable provisions of Regulation M.

(r) **Enforce Lock-Up Agreements.** During the Lock-up Period, the Company will enforce all agreements between the Company and any of its security holders that restrict or prohibit, expressly or in operation, the offer, sale or transfer of Shares or Related Securities or any of the other actions restricted or prohibited under the terms of the form of Lock-up Agreement. In addition, if requested by the Representatives, the Company will direct the transfer agent to place stop transfer restrictions upon any such securities of the Company that are bound by such “lock-up” agreements for the duration of the periods contemplated in such agreements, including, without limitation, “lock-up” agreements entered into by the Company’s officers and directors pursuant to Section 6(l) hereof.

(s) **Company to Provide Interim Financial Statements** Prior to the First Closing Date and each applicable Option Closing Date, the Company will furnish to the Representatives, as soon as they have been prepared by or are available to the Company, a copy of any unaudited interim financial statements of the Company for any period subsequent to the period covered by the most recent financial statements appearing in the Registration Statement and the Prospectus.

The Representatives may, in their sole discretion, waive in writing the performance by the Company of any one or more of the foregoing covenants or extend the time for their performance.

Section 4. Payment of Expenses. The Company agrees to pay all costs, fees and expenses incurred in connection with the performance of its obligations hereunder and in connection with the transactions contemplated hereby, including without limitation (i) all expenses incident to the issuance and delivery of the Securities (including all printing costs), (ii) all fees and expenses of the registrar and transfer agent of the Shares, (iii) all necessary issue, transfer and other stamp taxes in connection with the issuance and sale of the Securities to the Underwriters, (iv) all fees and expenses of the Company's counsel, independent public or certified public accountants and other advisors, (v) all costs and expenses incurred in connection with the preparation, printing, filing, shipping and distribution of the Registration Statement (including financial statements, exhibits, schedules, consents and certificates of experts), the Time of Sale Prospectus, the Prospectus, each free writing prospectus prepared by or on behalf of, used by, or referred to by the Company, and each preliminary prospectus, all amendments and supplements thereto, and this Agreement, (vi) all filing fees, attorneys' fees and expenses incurred by the Company or the Underwriters in connection with qualifying or registering (or obtaining exemptions from the qualification or registration of) all or any part of the Securities for offer and sale under the state securities or blue sky laws, (vii) the costs, fees and expenses incurred by the Underwriters in connection with determining their compliance with the rules and regulations of FINRA related to the Underwriters' participation in the Offering and the distribution of the Securities, including any related filing fees and the legal fees of, and disbursements by, counsel to the Underwriters, (viii) the costs and expenses of the Company relating to investor presentations on any Road Show, including, without limitation, expenses associated with the preparation or dissemination of any electronic Road Show, expenses associated with the production of Road Show slides and graphics, fees and expenses of any consultants engaged in connection with the Road Show presentations with the prior approval of the Company, travel and lodging expenses of the representatives, employees and officers of the Company and any such consultants, and the cost of any aircraft chartered in connection with the Road Show, (ix) the fees and expenses associated with listing the Securities on the Nasdaq, and (x) all other fees, costs and expenses of the nature referred to in Item 14 of Part II of the Registration Statement. Except as provided in this Section 4 or in Section 7, Section 9 or Section 10 hereof, the Underwriters shall pay their own expenses, including the fees and disbursements of their counsel.

Section 5. Covenant of the Underwriters. Each Underwriter severally and not jointly covenants with the Company not to take any action that would result in the Company being required to file with the Commission pursuant to Rule 433(d) under the Securities Act a free writing prospectus prepared by or on behalf of such Underwriter that otherwise would not, but for such actions, be required to be filed by the Company under Rule 433(d).

Section 6. Conditions of the Obligations of the Underwriters. The respective obligations of the several Underwriters hereunder to purchase and pay for the Securities as provided herein on the First Closing Date and, with respect to the Optional Shares, each Option Closing Date, shall be subject to the accuracy of the representations and warranties on the part of the Company set forth in Section 1 hereof as of the date hereof and as of the First Closing Date as though then made and, with respect to the Optional Shares, as of each Option Closing Date as though then made, to the timely performance by the Company of its covenants and other obligations hereunder, and to each of the following additional conditions:

(a) **Comfort Letter.** On the date hereof, the Representatives shall have received from Ernst & Young LLP, independent registered public accountants for the Company, a letter dated the date hereof

addressed to the Underwriters, in form and substance satisfactory to the Representatives, containing statements and information of the type ordinarily included in accountant's "comfort letters" to underwriters, delivered according to Statement of Auditing Standards No. 72 (or any successor bulletin), with respect to the audited and unaudited financial statements and certain financial information contained in the Registration Statement, the Time of Sale Prospectus, and each free writing prospectus, if any.

(b) Compliance with Registration Requirements; No Stop Order; No Objection from FINRA. For the period from and after the date of this Agreement and through and including the First Closing Date and, with respect to any Optional Shares purchased after the First Closing Date, each Option Closing Date:

(i) The Company shall have filed the Prospectus with the Commission (including the information required by Rule 430B under the Securities Act) in the manner and within the time period required by Rule 424(b) under the Securities Act; or the Company shall have filed a post-effective amendment to the Registration Statement containing the information required by such Rule 430B, and such post-effective amendment shall have become effective.

(ii) No stop order suspending the effectiveness of the Registration Statement or any post-effective amendment to the Registration Statement shall be in effect, and no proceedings for such purpose shall have been instituted or threatened by the Commission.

(iii) If a filing has been made with FINRA, FINRA shall have raised no objection to the fairness and reasonableness of the underwriting terms and arrangements.

(c) No Material Adverse Change or Ratings Agency Change. For the period from and after the date of this Agreement and through and including the First Closing Date and, with respect to any Optional Shares purchased after the First Closing Date, each Option Closing Date:

(i) in the judgment of the Representatives there shall not have occurred any Material Adverse Change; and

(ii) there shall not have occurred any downgrading, nor shall any notice have been given of any intended or potential downgrading or of any review for a possible change that does not indicate the direction of the possible change, in the rating accorded any securities of the Company or any of its subsidiaries by any "nationally recognized statistical rating organization" as that term is used in Rule 15c3-1(c)(2)(vi)(F) under the Exchange Act.

(d) Opinion of Counsel for the Company. On each of the First Closing Date and each Option Closing Date the Representatives shall have received the opinion and negative assurance letter of Greenberg Traurig, LLP, counsel for the Company, dated as of such date, in the form attached hereto as Exhibit A.

(e) Opinion of Counsel for the Underwriters. On each of the First Closing Date and each Option Closing Date the Representatives shall have received the opinion and negative assurance letter of Skadden, Arps, Slate, Meagher & Flom LLP, counsel for the Underwriters in connection with the offer and sale of the Securities, in form and substance satisfactory to the Underwriters, dated as of such date.

(f) Officers' Certificate. On each of the First Closing Date and each Option Closing Date, the Representatives shall have received a certificate executed by the Chief Executive Officer or President of the Company and the Chief Financial Officer of the Company, dated as of such date, to the effect set forth in Section 6(b)(ii) and further to the effect that:

(i) for the period from and including the date of this Agreement through and including such date, there has not occurred any Material Adverse Change;

(ii) the representations, warranties and covenants of the Company set forth in Section 1(A) of this Agreement are true and correct with the same force and effect as though expressly made on and as of such date; and

(iii) the Company has complied with all the agreements hereunder and satisfied all the conditions on its part to be performed or satisfied hereunder at or prior to such date.

(g) **Bring-down Comfort Letter.** On each of the First Closing Date and each Option Closing Date the Representatives shall have received from Ernst & Young LLP, independent registered public accountants for the Company, a letter dated such date, in form and substance satisfactory to the Representatives, which letter shall: (i) reaffirm the statements made in the letter furnished by them pursuant to Section 6(a), except that the specified date referred to therein for the carrying out of procedures shall be no more than three business days prior to the First Closing Date or the applicable Option Closing Date, as the case may be; and (ii) cover certain financial information contained in the Prospectus.

(h) **Lock-Up Agreements.** On or prior to the date hereof, the Company shall have furnished to the Representatives an agreement in the form of Exhibit B hereto from each of the persons listed on Exhibit C hereto, and each such agreement shall be in full force and effect on each of the First Closing Date and each Option Closing Date.

(i) **Rule 462(b) Registration Statement.** In the event that a Rule 462(b) Registration Statement is filed in connection with the Offering, such Rule 462(b) Registration Statement shall have been filed with the Commission on the date of this Agreement and shall have become effective automatically upon such filing.

(j) **CFO Certificate.** On the date of this Agreement and on the First Closing Date or the applicable Option Closing Date, as the case may be, the Company shall have furnished to the Representatives a certificate, dated the respective dates of delivery thereof and addressed to the Underwriters, of its Chief Financial Officer with respect to certain financial data contained in the Time of Sale Prospectus and the Prospectus, providing “management comfort” with respect to such information, in form and substance reasonably satisfactory to the Representatives.

(k) **[Reserved]**

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

If any condition specified in this Section 6 is not satisfied when and as required to be satisfied, this Agreement may be terminated by the Representatives by notice from Jefferies to the Company at any time on or prior to the First Closing Date and, with respect to the Optional Shares, at any time on or prior to the applicable Option Closing Date, which termination shall be without liability on the part of any party to any other party, except that Section 4, Section 7, Section 9 and Section 10 shall at all times be effective and shall survive such termination.

Section 7. Reimbursement of Underwriters' Expenses. If this Agreement is terminated by the Representatives pursuant to Section 6 or Section 12, or if the sale to the Underwriters of the Securities on the First Closing Date is not consummated because of any refusal, inability or failure on the part of the Company to perform any agreement herein or to comply with any provision hereof, the Company agrees to reimburse the Representatives and the other Underwriters (or such Underwriters as have terminated this Agreement with respect to themselves), severally, upon demand for all out-of-pocket expenses that shall have been reasonably incurred by the Representatives and the other Underwriters in connection with the proposed purchase and the offering and sale of the Securities, including, but not limited to, fees and disbursements of counsel, printing expenses, travel expenses, postage, facsimile and telephone charges.

Section 8. Effectiveness of this Agreement. This Agreement shall become effective upon the execution and delivery hereof by the parties hereto.

Section 9. Indemnification.

(a) Indemnification of the Underwriters. The Company agrees to indemnify and hold harmless each Underwriter, its affiliates, directors, officers, employees and agents, and each person, if any, who controls any Underwriter within the meaning of the Securities Act or the Exchange Act against any loss, claim, damage, liability or expense, as incurred, to which such Underwriter or such affiliate, director, officer, employee, agent or controlling person may become subject, under the Securities Act, the Exchange Act, other federal or state statutory law or regulation, or the laws or regulations of foreign jurisdictions where Securities have been offered or sold or at common law or otherwise (including in settlement of any litigation, if such settlement is effected with the written consent of the Company), insofar as such loss, claim, damage, liability or expense (or actions in respect thereof as contemplated below) arises out of or is based upon (i) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, or any amendment thereto, or the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading; or (ii) any untrue statement or alleged untrue statement of a material fact included in any preliminary prospectus, the Time of Sale Prospectus, any free writing prospectus that the Company has used, referred to or filed, or is required to file, pursuant to Rule 433(d) of the Securities Act, any materials provided to investors by, or with the approval of, the Company in connection with the marketing of the Offering, including any Road Show or written investor presentations provided to investors by the Company (whether in person or electronically) ("**marketing material**"), or the Prospectus (or any amendment or supplement to the foregoing), or the omission or alleged omission to state therein a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; and to reimburse each Underwriter and each such affiliate, director, officer, employee, agent and controlling person for any and all expenses (including the fees and disbursements of one primary counsel and one local counsel in each required jurisdiction) as such expenses are reasonably incurred by such Underwriter or such affiliate, director, officer, employee, agent or controlling person in connection with investigating, defending, settling, compromising or paying any such loss, claim, damage, liability, expense or action; *provided, however*, that the foregoing indemnity agreement shall not apply to any loss, claim, damage, liability or expense to the extent, but only to the extent, arising out of or based upon any untrue statement or alleged untrue statement or omission or alleged omission made in reliance upon and in conformity with information relating to any Underwriter furnished to the Company by the Representatives in writing expressly for use in the Registration Statement, any preliminary prospectus, the Time of Sale Prospectus, any such free writing prospectus, any marketing material or the Prospectus (or any amendment or supplement thereto), it being understood and agreed that the only such information consists of the information described in Section 9(b) below. The indemnity agreement set forth in this Section 9(a) shall be in addition to any liabilities that the Company may otherwise have.

(b) Indemnification of the Company, its Directors and Officers. Each Underwriter agrees, severally and not jointly, to indemnify and hold harmless the Company, each of its directors, each of its officers who signed the Registration Statement and each person, if any, who controls the Company within the meaning of the Securities Act or the Exchange Act, against any loss, claim, damage, liability or expense, as incurred, to which the Company, or any such director, officer or controlling person may become subject, under the Securities Act, the Exchange Act, or other federal or state statutory law or regulation, or at common law or otherwise (including in settlement of any litigation, if such settlement is effected with the written consent of such Underwriter), insofar as such loss, claim, damage, liability or expense (or actions in respect thereof as contemplated below) arises out of or is based upon (i) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, or any amendment thereto, or any omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading or (ii) any untrue statement or alleged untrue statement of a material fact included in any preliminary prospectus, the Time of Sale Prospectus, any free writing prospectus that the Company has used, referred to or filed, or is required to file, pursuant to Rule 433 of the Securities Act or the Prospectus (or any such amendment or supplement) or the omission or alleged omission to state therein a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading, in each case to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in the Registration Statement, such preliminary prospectus, the Time of Sale Prospectus, such free writing prospectus or the Prospectus (or any such amendment or supplement), in reliance upon and in conformity with information relating to such Underwriter furnished to the Company by the Representatives in writing expressly for use therein; and to reimburse the Company, or any such director, officer or controlling person for any and all expenses (including the fees and disbursements of one primary counsel and one local counsel in each required jurisdiction) as such expenses are incurred by the Company, or any such director, officer or controlling person in connection with investigating, defending, settling, compromising or paying any such loss, claim, damage, liability, expense or action. The Company hereby acknowledges that the only information that the Representatives have furnished to the Company expressly for use in the Registration Statement, any preliminary prospectus, the Time of Sale Prospectus, any free writing prospectus that the Company has filed, or is required to file, pursuant to Rule 433(d) of the Securities Act or the Prospectus (or any amendment or supplement to the foregoing) are the statements set forth in the first sentence of the third paragraph under the caption "Underwriting," in the first and second sentences of the first paragraph under the caption "Underwriting—Underwriting Discounts and Expenses," and in the first, second, third, fourth, fifth and sixth paragraphs under the caption "Underwriting—Stabilization" in the Preliminary Prospectus Supplement and the Final Prospectus Supplement. The indemnity agreement set forth in this Section 9(b) shall be in addition to any liabilities that each Underwriter may otherwise have.

(c) Notifications and Other Indemnification Procedures. Promptly after receipt by an indemnified party under this Section 9 of notice of the commencement of any action, such indemnified party will, if a claim in respect thereof is to be made against an indemnifying party under this Section 9, notify the indemnifying party in writing of the commencement thereof, but the omission to so notify the indemnifying party will not relieve the indemnifying party from any liability which it may have to any indemnified party to the extent the indemnifying party is not materially prejudiced as a proximate result of such failure and shall not in any event relieve the indemnifying party from any liability that it may have otherwise than on account of this indemnity agreement. In case any such action is brought against any indemnified party and such indemnified party seeks or intends to seek indemnity from an indemnifying party, the indemnifying party will be entitled to participate in, and, to the extent that it shall elect, jointly with all other indemnifying parties similarly notified, by written notice delivered to the indemnified party

promptly after receiving the aforesaid notice from such indemnified party, to assume the defense thereof with counsel reasonably satisfactory to such indemnified party; *provided, however*, that if the defendants in any such action include both the indemnified party and the indemnifying party and the indemnified party shall have reasonably concluded that a conflict may arise between the positions of the indemnifying party and the indemnified party in conducting the defense of any such action or that there may be legal defenses available to it and/or other indemnified parties which are different from or additional to those available to the indemnifying party, the indemnified party or parties shall have the right to select separate counsel to assume such legal defenses and to otherwise participate in the defense of such action on behalf of such indemnified party or parties. Upon receipt of notice from the indemnifying party to such indemnified party of such indemnifying party's election to so assume the defense of such action and approval by the indemnified party of counsel, the indemnifying party will not be liable to such indemnified party under this Section 9 for any legal or other expenses subsequently incurred by such indemnified party in connection with the defense thereof unless (i) the indemnified party shall have employed separate counsel in accordance with the proviso to the preceding sentence (it being understood, however, that the indemnifying party shall not be liable for the fees and expenses of more than one separate counsel (together with local counsel), representing the indemnified parties who are parties to such action), which counsel (together with any local counsel) for the indemnified parties shall be selected by Jefferies (in the case of counsel for the indemnified parties referred to in Section 9(a) above) or by the Company (in the case of counsel for the indemnified parties referred to in Section 9(b) above) or (ii) the indemnifying party shall not have employed counsel satisfactory to the indemnified party to represent the indemnified party within a reasonable time after notice of commencement of the action or (iii) the indemnifying party has authorized in writing the employment of counsel for the indemnified party at the expense of the indemnifying party, in each of which cases the fees and expenses of counsel shall be at the expense of the indemnifying party and shall be paid as they are incurred.

(d) Settlements. The indemnifying party under this Section 9 shall not be liable for any settlement of any proceeding effected without its written consent, but if settled with such consent or if there be a final judgment for the plaintiff, the indemnifying party agrees to indemnify the indemnified party against any loss, claim, damage, liability or expense by reason of such settlement or judgment. Notwithstanding the foregoing sentence, if at any time an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for fees and expenses of counsel as contemplated by Section 9(c) hereof, the indemnifying party shall be liable for any settlement of any proceeding effected without its written consent if (i) such settlement is entered into more than 30 days after receipt by such indemnifying party of the aforesaid request and (ii) such indemnifying party shall not have reimbursed the indemnified party in accordance with such request prior to the date of such settlement. No indemnifying party shall, without the prior written consent of the indemnified party, effect any settlement, compromise or consent to the entry of judgment in any pending or threatened action, suit or proceeding in respect of which any indemnified party is or could have been a party and indemnity was or could have been sought hereunder by such indemnified party, unless such settlement, compromise or consent includes an unconditional release of such indemnified party from all liability on claims that are the subject matter of such action, suit or proceeding and does not include an admission of fault or culpability or a failure to act by or on behalf of such indemnified party.

Section 10. Contribution. If the indemnification provided for in Section 9 is for any reason held to be unavailable to or otherwise insufficient to hold harmless an indemnified party in respect of any losses, claims, damages, liabilities or expenses referred to therein, then each indemnifying party shall contribute to the aggregate amount paid or payable by such indemnified party, as incurred, as a result of any losses, claims, damages, liabilities or expenses referred to therein (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 or (ii) if the allocation provided by clause (i) above 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 the Underwriters, on the other hand, in connection with the statements or omissions which resulted in such losses, claims, damages, liabilities 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 shall be deemed to be in the same respective proportions as the total proceeds from the Offering (after deducting underwriter discounts and commissions but 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 front cover page 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, on the one hand, or the Underwriters, on the other hand, and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission.

The amount paid or payable by a party as a result of the losses, claims, damages, liabilities and expenses referred to above shall be deemed to include, subject to the limitations set forth in Section 9(c), any legal or other fees or expenses reasonably incurred by such party in connection with investigating or defending any action or claim. The provisions set forth in Section 9(c) with respect to notice of commencement of any action shall apply if a claim for contribution is to be made under this Section 10; *provided, however*, that no additional notice shall be required with respect to any action for which notice has been given under Section 9(c) for purposes of indemnification.

The Company and the Underwriters agree that it would not be just and equitable if contribution pursuant to this Section 10 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 in this Section 10.

Notwithstanding the provisions of this Section 10, no Underwriter shall be required to contribute any amount in excess of the underwriting discounts and commissions received by such Underwriter in connection with the Securities underwritten by it and distributed to the public. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The Underwriters' obligations to contribute pursuant to this Section 10 are several, and not joint, in proportion to their respective underwriting commitments as set forth opposite their respective names on Schedule A. For purposes of this Section 10, each affiliate, director, officer, employee and agent of an Underwriter and each person, if any, who controls an Underwriter within the meaning of the Securities Act or the Exchange Act 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 the Securities Act and the Exchange Act shall have the same rights to contribution as the Company.

Section 11. Default of One or More of the Several Underwriters. If, on the First Closing Date or any Option Closing Date, any one or more of the several Underwriters shall fail or refuse to purchase Securities that it or they have agreed to purchase hereunder on such date, and the aggregate number of Securities which such defaulting Underwriter or Underwriters agreed but failed or refused to purchase does not exceed 10% of the aggregate number of the Securities to be purchased hereunder on such date, the Representatives may make arrangements satisfactory to the Company for the purchase of such Securities by other persons, including any of the Underwriters, but if no such arrangements are made by such date, the other Underwriters shall be obligated, severally and not jointly, in the proportions that the number of Firm Shares set forth opposite their respective names on Schedule A bears to the aggregate

number of Firm Shares set forth opposite the names of all such non-defaulting Underwriters, or in such other proportions as may be specified by the Representatives with the consent of the non-defaulting Underwriters, to purchase the Securities which such defaulting Underwriter or Underwriters agreed but failed or refused to purchase on such date. If, on the First Closing Date or any Option Closing Date any one or more of the Underwriters shall fail or refuse to purchase Securities and the aggregate number of Securities with respect to which such default occurs exceeds 10% of the aggregate number of Securities to be purchased hereunder on such date, and arrangements satisfactory to the Representatives and the Company for the purchase of such Securities are not made within 48 hours after such default, this Agreement shall terminate without liability of any party to any other party except that the provisions of Section 4, Section 7, Section 9 and Section 10 shall at all times be effective and shall survive such termination. In any such case either the Representatives or the Company shall have the right to postpone the First Closing Date or the applicable Option Closing Date, as the case may be, but in no event for longer than seven days in order that the required changes, if any, to the Registration Statement and the Prospectus or any other documents or arrangements may be effected.

Section 12. Termination of this Agreement Prior to the purchase of the Firm Shares by the Underwriters on the First Closing Date, this Agreement may be terminated by the Representatives by notice given to the Company if at any time: (i) trading or quotation in any of the Company's securities shall have been suspended or limited by the Commission or by the Nasdaq, or trading in securities generally on either the Nasdaq or the New York Stock Exchange shall have been suspended or limited, or minimum or maximum prices shall have been generally established on the Nasdaq; (ii) a general banking moratorium shall have been declared by any of federal, New York, or Florida authorities; (iii) there shall have occurred any outbreak or escalation of national or international hostilities or any crisis or calamity, or any change in the United States or international financial markets, or any substantial change or development involving a prospective substantial change in United States' or international political, financial or economic conditions, as in the judgment of the Representatives is material and adverse and makes it impracticable to market the Securities in the manner and on the terms described in the Time of Sale Prospectus or the Prospectus or to enforce contracts for the sale of securities; (iv) in the judgment of the Representatives there shall have occurred any Material Adverse Change; or (v) the Company shall have sustained a loss by strike, fire, flood, earthquake, accident or other calamity of such character as in the judgment of the Representatives may interfere materially with the conduct of the business and operations of the Company regardless of whether or not such loss shall have been insured. Any termination pursuant to this Section 12 shall be without liability on the part of (a) the Company to any Underwriter, except that the Company shall be obligated to reimburse the expenses of the Representatives and the other Underwriters pursuant to Section 4 or Section 7 hereof or (b) any Underwriter to the Company; *provided, however*, that the provisions of Section 9 and Section 10 shall at all times be effective and shall survive such termination.

Section 13. No Advisory or Fiduciary Relationship. The Company acknowledges and agrees that (a) the purchase and sale of the Securities pursuant to this Agreement, including the determination of the public offering price of the Securities and any related discounts and commissions, is an arm's-length commercial transaction between the Company, on the one hand, and the several Underwriters, on the other hand, (b) in connection with the Offering and the process leading to such transaction, each Underwriter is and has been acting solely as a principal and is not the agent or fiduciary of the Company, or its stockholders, or its creditors, employees or any other party, (c) no Underwriter has assumed or will assume an advisory or fiduciary responsibility in favor of the Company with respect to the Offering or the process leading thereto (irrespective of whether such Underwriter has advised or is currently advising the Company on other matters) and no Underwriter has any obligation to the Company with respect to the Offering except the obligations expressly set forth in this Agreement, (d) the Underwriters and their respective affiliates may be engaged in a broad range of transactions that involve interests that differ from those of the Company, and (e) the Underwriters have not provided any legal, accounting, regulatory or tax advice with respect to the Offering and the Company has consulted its own legal, accounting, regulatory and tax advisors to the extent it deemed appropriate.

Section 14. Representations and Indemnities to Survive Delivery. The respective indemnities, agreements, representations, warranties and other statements of the Company, of its officers and of the several Underwriters set forth in or made pursuant to this Agreement will remain in full force and effect, regardless of any investigation made by or on behalf of any Underwriter or the Company or any of its or their partners, officers or directors or any controlling person, as the case may be, and, anything herein to the contrary notwithstanding, will survive delivery of and payment for the Securities sold hereunder and any termination of this Agreement.

Section 15. Notices. All communications hereunder shall be in writing and shall be mailed, hand delivered or telecopied and confirmed to the parties hereto as follows:

If to the Representatives:	Jefferies LLC 520 Madison Avenue New York, New York 10022 Facsimile: (646) 619-4437 Attention: General Counsel Piper Jaffray & Co. 800 Nicollet Mall, J12S03 Minneapolis, MN 55402 Attention: General Counsel Guggenheim Securities, LLC 330 Madison Avenue, 8th Floor New York, NY 10017 Attention: General Counsel
with a copy to:	Skadden, Arps, Slate, Meagher & Flom LLP Four Times Square New York, New York 10036 Facsimile: (917) 777-3259 Attention: Michael Zeidel
If to the Company:	OPKO Health, Inc. 4400 Biscayne Blvd. Miami, Florida 33137 Attention: Kate Inman, Esq. Email: KInman@OPKO.com
with a copy to:	Greenberg Traurig, LLP 333 S.E. 2nd Avenue, Suite 4400 Miami, FL 33131 Facsimile: (305) 961-5856 Attention: Robert L. Grossman, Esq. Drew M. Altman, Esq.

Any party hereto may change the address for receipt of communications by giving written notice to the others.

Section 16. Successors. This Agreement will inure to the benefit of and be binding upon the parties hereto, including any substitute Underwriters pursuant to Section 11 hereof, and to the benefit of the affiliates, directors, officers, employees, agents and controlling persons referred to in Section 9 and Section 10, and in each case their respective successors, and no other person will have any right or obligation hereunder. The term “successors” shall not include any purchaser of the Securities as such from any of the Underwriters merely by reason of such purchase.

Section 17. Partial Unenforceability. The invalidity or unenforceability of any section, paragraph or provision of this Agreement shall not affect the validity or enforceability of any other section, paragraph or provision hereof. If any section, paragraph or provision of this Agreement is for any reason determined to be invalid or unenforceable, there shall be deemed to be made such minor changes (and only such minor changes) as are necessary to make it valid and enforceable.

Section 18. Recognition of the U.S. Special Resolution Regimes.

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

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

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

Section 19. Governing Law Provisions. This Agreement shall be governed by and construed in accordance with the internal laws of the State of New York applicable to agreements made and to be performed in such state. Any legal suit, action or proceeding arising out of or based upon this Agreement or the transactions contemplated hereby may be instituted in the federal courts of the United States of America located in the Borough of Manhattan in the City of New York or the courts of the State of New York in each case located in the Borough of Manhattan in the City of New York (collectively, the “Specified Courts”), and each party irrevocably submits to the exclusive jurisdiction (except for proceedings instituted in regard to the enforcement of a judgment of any such court, as to which such jurisdiction is non-exclusive) of such courts in any such suit, action or proceeding. Service of any process, summons, notice or document by mail to such party’s address set forth above shall be effective service of process for any suit, action or other proceeding brought in any such court. The parties irrevocably and unconditionally waive any objection to the laying of venue of any suit, action or other proceeding in the Specified Courts and irrevocably and unconditionally waive and agree not to plead or claim in any such court that any such suit, action or other proceeding brought in any such court has been brought in an inconvenient forum.

Section 20. General Provisions. This Agreement constitutes the entire agreement of the parties to this Agreement and supersedes all prior written or oral and all contemporaneous oral agreements, understandings and negotiations with respect to the subject matter hereof. This Agreement may be executed in two or more counterparts, each one of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument. Facsimile or other electronically scanned and transmitted signatures, including by email attachment, shall be deemed originals for all purposes of this Agreement. This Agreement may not be amended or modified unless in writing by all of the parties hereto, and no condition herein (express or implied) may be waived unless waived in writing by each party whom the condition is meant to benefit. The section headings herein are for the convenience of the parties only and shall not affect the construction or interpretation of this Agreement.

Each of the parties hereto acknowledges that it is a sophisticated business person who was adequately represented by counsel during negotiations regarding the provisions hereof, including, without limitation, the indemnification provisions of Section 9 and the contribution provisions of Section 10, and is fully informed regarding said provisions. Each of the parties hereto further acknowledges that the provisions of Section 9 and Section 10 hereof fairly allocate the risks in light of the ability of the parties to investigate the Company, its affairs and its business in order to assure that adequate disclosure has been made in the Registration Statement, any preliminary prospectus, the Time of Sale Prospectus, each free writing prospectus and the Prospectus (and any amendments and supplements to the foregoing), as contemplated by the Securities Act and the Exchange Act.

If the foregoing is in accordance with your understanding of our agreement, kindly sign and return to the Company the enclosed copies hereof, whereupon this instrument, along with all counterparts hereof, shall become a binding agreement in accordance with its terms.

Very truly yours,

OPKO Health, Inc.

By: /s/ Steven D. Rubin

Name: Steven D. Rubin

Title:

The foregoing Underwriting Agreement is hereby confirmed and accepted by the Underwriters in New York, New York as of the date first above written.

JEFFERIES LLC

PIPER JAFFRAY & CO.

GUGGENHEIM SECURITIES, LLC

Acting individually and as Representatives of the several
Underwriters named in the attached Schedule A

Jefferies LLC

By: /s/ Kevin Sheridan

Name: Kevin Sheridan

Title: Managing Director

Piper Jaffray & Co.

By: /s/ Neil Riley

Name: Neil Riley

Title: Managing Director

Guggenheim Securities, LLC

By: /s/ Fares D. Noujaim

Name: Fares D. Noujaim

Title: Senior Managing Director

Underwriters	Number of Firm Shares to be Purchased
Jefferies LLC	25,000,000
Piper Jaffray & Co.	17,500,000
Guggenheim Securities, LLC	6,250,000
Barrington Research Associates, Inc.	1,250,000
Total	<u>50,000,000</u>

Free Writing Prospectuses Included in the Time of Sale Prospectus

None.

[Letterhead of Greenberg Traurig, LLP]

October 29, 2019

Opko Health, Inc.
4400 Biscayne Blvd.
Miami, FL 33137

Re: Shelf Registration Statement on Form S-3

Ladies and Gentlemen:

We have acted as legal counsel to OPKO Health, Inc., a Delaware corporation (the "Company"), in connection with the issuance and sale by the Company of 50,000,000 shares (the "Shares") of its common stock, par value \$0.01 per share ("Common Stock"), pursuant to (i) the Registration Statement on Form S-3 (File No. 333-229400) (the "Shelf Registration Statement") filed by the Company with the Securities and Exchange Commission (the "Commission") on January 29, 2019 under the Securities Act of 1933, as amended (the "Securities Act"), which became effective upon filing, and (ii) the Company's prospectus supplement dated October 24, 2019 filed on October 25, 2019 with the Commission pursuant to Rule 424(b)(5) under the Securities Act (the "Prospectus"). All of the Shares are to be issued and sold by the Company as described in the Shelf Registration Statement and the Prospectus.

With respect to the opinion set forth below, we have examined originals, certified copies or copies otherwise identified to our satisfaction as being true copies, of the following:

- A. the Amended and Restated Certificate of Incorporation of the Company, as amended to date (the "Charter");
- B. the Amended and Restated Bylaws of the Company, as amended to date;
- C. the Shelf Registration Statement;
- D. the Prospectus;
- E. the Underwriting Agreement, dated October 24, 2019, by and among the Company, Jefferies LLC, Piper Jaffray & Co. and Guggenheim Securities, LLC, acting as representatives of the several underwriters listed on Schedule A therein;
- G. the resolutions of the board of directors of the Company and the pricing committee of the board of directors of the Company relating to the Prospectus and the transactions in connection therewith and the authorization of the issuance and sale of the Shares; and

H. such other documents, records and other instruments as we have deemed appropriate for purposes of the opinion set forth herein.

In rendering the opinion set forth below, we have assumed the genuineness of all signatures, the legal capacity of natural persons, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as duplicates or certified or conformed copies and the authenticity of originals or such latter documents. As to various questions of fact material to this opinion, we have relied, to the extent we deemed reasonably appropriate, upon representations of officers or directors of the Company and upon documents, records and instruments furnished to us by the Company, without independently checking or verifying the accuracy of such documents, records and instruments.

Based solely upon and subject to the foregoing, and subject to the assumptions, limitations and qualifications stated herein, we are of the opinion that the Shares have been duly authorized for issuance by the Company and, when issued and sold by the Company against payment therefor in the manner and under the terms described in the Shelf Registration Statement, the Prospectus and the Underwriting Agreement, the Shares will be validly issued, fully paid and nonassessable.

This opinion letter is limited to the matters stated herein and no opinions may be implied or inferred beyond the matters expressly stated herein. We do not express any opinion herein concerning any law other than the laws of the State of Delaware and the federal laws of the United States. Further, our opinion is based solely upon existing laws, rules and regulations and we undertake no obligation to advise you of any changes that may be brought to our attention after the date hereof.

We hereby consent to the filing of this opinion letter as an exhibit to the Company's Current Report on Form 8-K relating to the issuance of the Shares, which is incorporated by reference in the Shelf Registration Statement and to the reference to this firm under the caption "Legal Matters" in the Prospectus constituting a part of the Shelf Registration Statement. In giving such consent, we do not admit that we come within the category of persons whose consent is required by Section 7 of the Securities Act or the rules and regulations of the Commission thereunder.

Very truly yours,

/s/ Greenberg Traurig, LLP

Greenberg Traurig, LLP