As filed with the Securities and Exchange Commission on June 4, 2018.

Registration No. 333-

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

# FORM S-1
**REGISTRATION STATEMENT**
**UNDER**
**THE SECURITIES ACT OF 1933**

# OPTINOSE, INC.
(Exact Name of Registrant as Specified in its Charter)

| **Delaware** | **2834** | **42-1771610** |
|---|---|---|
| (State or other jurisdiction of incorporation or organization) | (Primary Standard Industrial Classification Code Number) | (I.R.S. Employer Identification No.) |

**1020 Stony Hill Road, Suite 300**
**Yardley, Pennsylvania 19067**
**(267) 364-3500**
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

**Peter K. Miller**
**Chief Executive Officer**
**OptiNose, Inc.**
**1020 Stony Hill Road, Suite 300**
**Yardley, Pennsylvania 19067**
**(267) 364-3500**
(Name, address, including zip code, and telephone number, including area code, of agent for service)

**Copies to:**

| Steven J. Abrams<br>Hogan Lovells US LLP<br>1735 Market Street, 23rd Floor<br>Philadelphia, PA 19103<br>(267) 675-4600 | Michael F. Marino<br>Chief Legal Officer<br>OptiNose, Inc.<br>1020 Stony Hill Road, Suite 300<br>Yardley, PA 19067<br>(267) 364-3500 | Divakar Gupta<br>Brian F. Leaf<br>Jeffrey P. Libson<br>Cooley LLP<br>1114 Avenue of the Americas<br>New York, NY 10036<br>(212) 479-6000 |
|---|---|---|

**Approximate date of commencement of proposed sale to public:**
**As soon as practicable after the effective date of this registration statement.**

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, as amended (the "Securities Act"), check the following box. ☐

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act (Check one):

| Large accelerated filer ☐ | Accelerated filer ☐ | Non-accelerated filer ☒ | Smaller reporting company | ☐ |
|---|---|---|---|---|
| | | (Do not check if a smaller reporting company) | 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 7(a)(2)(B) of the Securities Act. ☒

## CALCULATION OF REGISTRATION FEE

| Title of each class of securities to be registered | Amount to be registered (1) | Proposed maximum offering price per share (2) | Proposed maximum aggregate offering price (2) | Amount of registration fee |
|---|---|---|---|---|
| Common Stock, $0.001 par value per share | 5,175,000 | $22.74 | $117,679,500 | $14,652 |

(1) Includes additional shares that the underwriters have an option to purchase.

(2) Estimated solely for purposes of computing the amount of the registration fee pursuant to Rule 457(c) under the Securities Act of 1933, as amended, on the basis of the average high and low sales price of the Registrant's common stock as reported by the Nasdaq Global Select Market on May 31, 2018.

**The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the registration statement shall become effective on such date as the Commission acting pursuant to said Section 8(a), may determine.**

**The information in this preliminary prospectus is not complete and may be changed. Neither we nor the selling stockholders may sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and it is not soliciting offers to buy these securities in any state or other jurisdiction where the offer or sale is not permitted.**

SUBJECT TO COMPLETION, DATED JUNE 4, 2018

**PRELIMINARY PROSPECTUS**

# 4,500,000 Shares

# Common Stock

We are offering 2,250,000 shares of our common stock and the selling stockholders identified in this prospectus are offering 2,250,000 shares of our common stock. We will not receive any of the proceeds from the shares of common stock sold by the selling stockholders.

Our common stock is listed on the Nasdaq Global Select Market under the trading symbol “OPTN.” On June 1, 2018, the last reported sale price of our common stock on the Nasdaq Global Select Market was $22.40 per share. The final public offering price will be determined through negotiation among us, the selling stockholders and the lead underwriters in the offering, and the recent market price used throughout the prospectus may not be indicative of the final offering price.

We are an “emerging growth company” as defined by the Jumpstart Our Business Startups Act of 2012 and, as such, we are subject to reduced public company reporting requirements for this prospectus and future filings. See “Implications of Being an Emerging Growth Company” on page 15 of this prospectus.

**Investing in our common stock involves a high degree of risk. Please read “Risk Factors” beginning on page 9 of this prospectus, as well as in the documents incorporated by reference into this prospectus, for a discussion of the factors you should carefully consider before deciding to purchase our common stock.**

| | PER SHARE | TOTAL |
|---|---|---|
| Public offering price | $ | $ |
| Underwriting discounts and commissions (1) | $ | $ |
| Proceeds to OptiNose, Inc., before expenses | $ | $ |
| Proceeds to selling stockholders, before expenses | $ | $ |

(1) See “Underwriting” beginning on page 46 of this prospectus for information regarding compensation payable to the underwriters.

We and the selling stockholders have granted the underwriters an option for a period of 30 days to purchase up to an additional 675,000 shares of common stock at the public offering price, less the underwriting discounts and commissions.

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.**

The underwriters expect to deliver the shares of common stock to investors on or about , 2018.

**Jefferies** **Piper Jaffray** **BMO Capital Markets** **RBC Capital Markets**

**Cantor**

The date of this prospectus is , 2018.

## TABLE OF CONTENTS


| | Page |
|---|---|
| PROSPECTUS SUMMARY | 1 |
| THE OFFERING | 5 |
| SUMMARY CONSOLIDATED FINANCIAL DATA | 7 |
| RISK FACTORS | 9 |
| SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS | 13 |
| IMPLICATIONS OF BEING AN EMERGING GROWTH COMPANY | 15 |
| MARKET, INDUSTRY AND OTHER DATA | 15 |
| USE OF PROCEEDS | 16 |
| MARKET PRICE OF OUR COMMON STOCK | 17 |
| DIVIDEND POLICY | 18 |
| CAPITALIZATION | 19 |
| DILUTION | 21 |
| SELECTED CONSOLIDATED FINANCIAL DATA | 23 |
| CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS | 26 |
| PRINCIPAL AND SELLING STOCKHOLDERS | 31 |
| DESCRIPTION OF CAPITAL STOCK | 35 |
| SHARES ELIGIBLE FOR FUTURE SALE | 40 |
| MATERIAL UNITED STATES FEDERAL INCOME TAX CONSEQUENCES FOR NON-U.S. HOLDERS OF COMMON STOCK | 42 |
| UNDERWRITING | 46 |
| LEGAL MATTERS | 54 |
| EXPERTS | 54 |
| WHERE YOU CAN FIND MORE INFORMATION | 54 |
| INCORPORATION OF CERTAIN INFORMATION BY REFERENCE | 54 |


Neither we, the selling stockholders, nor any of the underwriters have authorized anyone to provide you with information different from, or in addition to, that contained in this prospectus or any free writing prospectus prepared by or on behalf of us or to which we may have referred you in connection with this offering. We and the selling stockholders take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. The information in this prospectus is accurate only as of its date, regardless of the time of delivery of this prospectus or of any sale of shares of our common stock. Our business, financial condition, results of operations and future growth prospects may have changed since that date

### TRADEMARKS

OPTINOSE®, XHANCE™ and Breath Powered® are trademarks of ours in the United States. Solely for convenience, trademarks and trade names referred to in this prospectus and in the documents incorporated by reference in this prospectus, including logos, artwork and other visual displays, may appear without the ® or ™ symbols, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights to these trademarks and trade names. All other trademarks, trade names and service marks appearing in this prospectus and in the documents incorporated by reference in this prospectus are the property of their respective owners. We do not intend our use or display of other companies'

trade names or trademarks to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

## INVESTORS OUTSIDE THE UNITED STATES

For investors outside of the United States: neither we, the selling stockholders nor any of the underwriters have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. You are required to inform yourselves about and to observe any restrictions relating to this offering and the distribution of this prospectus.

## PROSPECTUS SUMMARY

*This summary highlights information contained in greater detail elsewhere in this prospectus and in the documents incorporated by reference in this prospectus. This summary does not contain all of the information that you should consider in making your investment decision. You should read the entire prospectus and the documents incorporated by reference carefully before making an investment in our common stock. You should carefully consider, among other things, our consolidated financial statements and related notes incorporated by reference in this prospectus from our Annual Report on Form 10-K for the year ended December 31, 2017, or our 2017 Annual Report, and our Quarterly Report on Form 10-Q for the three months ended March 31, 2018, or our 2018 Quarterly Report, and the sections titled "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in our 2017 Annual Report and 2018 Quarterly Report and incorporated by reference in this prospectus.*

Unless the context otherwise requires, we use the terms "Optinose," "Company," "we," "us," "our" and similar designations in this prospectus to refer to OptiNose, Inc. and, where appropriate, our subsidiaries.

### Company Overview

We are a specialty pharmaceutical company focused on the development and commercialization of products for patients treated by ear, nose and throat, or ENT, and allergy specialists. Our lead product, XHANCE (fluticasone propionate) nasal spray, 93 mcg, is a therapeutic utilizing our proprietary Optinose Exhalation Delivery System, or EDS, that delivers a topically-acting and potent anti-inflammatory corticosteroid for the treatment of chronic rhinosinusitis with nasal polyps and, if approved, chronic rhinosinusitis without nasal polyps. Chronic rhinosinusitis is a serious nasal inflammatory disease that is currently treated using therapies, such as intranasal steroids, or INS, that have significant limitations. We believe XHANCE has a differentiated clinical profile with the potential to become part of the standard of care for this disease because it is able to deliver medication to the primary site of inflammation high and deep in the nasal passages in regions not adequately reached by current INS. We also believe that payors will respond favorably to XHANCE's clinical, cost, and quality-of-care profile, as compared to current and potential future costly drug therapy and surgical treatment options.

On September 18, 2017, the U.S. Food and Drug Administration, or FDA, approved our new drug application, or NDA, for XHANCE for the treatment of nasal polyps in patients 18 years of age or older. Based upon our research of over 300 pharmaceutical product launches between 2010 and 2016, we believe the evidence suggests that the success of a launch is highly dependent upon four critical factors: level of unmet need that exists within the market, level of clinical differentiation of a brand, market access and brand awareness. Therefore, rather than rushing our product to the market immediately following FDA approval, we employed a unique, purposeful launch model that would enable our commercial team to build market access for XHANCE and achieve critical levels of customer awareness to facilitate adoption upon making XHANCE available in the market.

### XHANCE Commercialization Update

Since FDA approval of our NDA for XHANCE, we have been focused on executing our integrated launch plan with the objective of making XHANCE widely available through retail pharmacies in the second quarter of 2018; we achieved that objective in early April 2018. The key strategies in our integrated launch plan include: (i) build a robust commercial supply chain network and quality management system, (ii) drive awareness and appreciation of the clinical differentiation of XHANCE, (iii) design and deploy our customer facing model, (iv) engage commercial payors with the objective of securing tier 3 coverage, and (v) develop our internal capabilities (e.g., Finance, HR, IT, Data Analytics and Compliance) to support a commercial stage company. We have made progress in each of these key strategic areas:

- Commercial Supply Chain. We have entered into commercial supply agreements with our key suppliers, spent significant time with our suppliers to oversee product production and quality management, and manufactured our initial commercial supply of XHANCE. We have contracted with a third-party logistics partner and our distribution partners.
- Brand Awareness. We have executed a broad, multi-channel awareness campaign leveraging digital, non-personal promotion and journal advertising and have already reached over 10,000 ENT physicians

and allergists with disease state and branded messages. From November 2017 through April 2018, we deployed a nurse educator team of approximately 85 nurse professionals who called on approximately 5,000 ENT physicians and allergists and delivered over 16,000 presentations. The focus of their interactions with healthcare professionals included: (i) introducing Optinose and highlighting the unmet medical need and limitations of current treatments, (ii) increasing awareness about XHANCE along with providing education on the mechanism of action and the differences associated with the Optinose EDS, and (iii) familiarizing healthcare professionals with the proper administration of XHANCE. Based on our market research, aided brand awareness (meaning awareness of XHANCE or Optinose when specifically asked) amongst a survey of ENT and allergy physicians is 87 percent, which achieves our objective of 85 percent brand awareness during the launch phase.

- Customer Model. We have defined a sales force footprint of approximately 120 territories targeting approximately 14,000 ENT physicians, allergists and "specialty like" primary care physicians and are deploying a hybrid sales model that combines an internal sales leadership team with a fully dedicated contract sales force to call on our target customer universe. We prioritized approximately 80 territories within our sales force footprint to deploy at launch based upon an expectation that we will achieve an estimated 65% commercial market access within each of those territories. The initial 80 territory managers completed training and were deployed in March 2018 engaging approximately 8,000 ENTs, allergists and primary care physician targets to promote XHANCE for the treatment of nasal polyps.

- XHANCE Xperience Program. In March 2018, we introduced the XHANCE Xperience program to offer physicians and their patients an opportunity to gain initial experience with XHANCE. As part of this program, patients receive up to two XHANCE prescriptions at no out-of-pocket cost to them ($0 co-pay). In order to receive the second prescription, patients are required to complete a brief survey regarding their use of XHANCE. Initial survey results have been encouraging and provide physicians with the opportunity to receive feedback on early patient responses to treatment. We believe that a positive physician and patient experience in the Xperience program will accelerate demand for XHANCE during the retail launch. The program launched on March 5, 2018, and, as of June 1, 2018, more than 1,750 unique physicians have written at least one prescription and approximately 9,200 units have been sent to patients. Almost all of the prescriptions dispensed since March 31, 2018 have been through the Xperience program and this program is expected to continue to be the primary source of demand for XHANCE for the remainder of the second quarter of 2018. The average selling price (ASP) of product dispensed under the Xperience program is significantly lower than the ASP for the retail channel. Our ability to generate net revenue and become profitable depends largely upon our ability to successfully commercialize XHANCE without the support provided by the Xperience program as well as our ability to broaden our market opportunity by successfully developing XHANCE for the treatment of chronic sinusitis. Based on results, we will evaluate whether or not to continue enrolling patients in the Xperience program after the second quarter of 2018.

- Market Access. Payers leverage various strategies to manage utilization of branded pharmaceutical products. An increasing number of payers are employing "new-to-market blocks" for launch brands until they have the opportunity to make a coverage decision based upon their internal review the product's clinical and pharmacoeconomic data. When a product is not covered, the patient is responsible to pay the full price for the medication which significantly limits utilization of the product. If a payer decides to cover a medication, payers will classify products based upon Tiers. Tiers determine the out-of-pocket costs for a patient. For example, a product that is covered on Tier 2 typically requires a co-pay by the patient of between $20 - $40 while a product that is covered on Tier 3 typically requires a co-pay by the patient of between $60 to $80.

  Payers will also use controls to manage the prescribing of products that they cover. These tools include passive management techniques, such as "step edits," which minimize the internal resources payers need to apply to ensure a medication is primarily used in the intended manner. A step edit requires prior use of another medication, usually a generic or preferred brand, prior to approving coverage for the product in question. This confirmation can be performed at the pharmacy level and includes an electronic look back. If the pharmacist is unable to confirm prior utilization of the "step medication," the pharmacist will need to contact the physician to obtain either a verbal or written confirmation of prior use of the "step medication." Payers will also use more active, aggressive management techniques

such as Prior Authorizations, or PAs. PAs require a physician to submit a written prior authorization form to be reviewed by the payer clinical staff prior to granting reimbursement for a prescription medication. A PA can sometimes be as simple as a physician checking a box documenting that a patient has previously tried a generic or preferred brand without benefit or as complex as a multi-page form requiring a detailed medical history of a patient.

We have engaged with approximately 40 health plans representing approximately 85% of U.S. commercial lives. In meeting with potential payors, we have shared what we believe is our compelling economic value proposition. Our analyses suggest that XHANCE will have a comparatively low pharmacy budget impact and our clinical trial data suggest that XHANCE may produce an offsetting benefit by helping reduce the rate of surgery with its related costs. For an insurance plan, this could represent a potential overall cost reduction for the population of patients with nasal polyps, as the overall cost of XHANCE could be less than the offsetting costs related to the reduction in surgeries. During clinical studies, XHANCE was also associated with an improvement in reported work productivity in treated patients, which should be valued by employers and patients. Further, we believe the cost of XHANCE to insurance plans will likely be significantly less than the projected costs of monoclonal antibodies that are currently in development for the treatment of nasal polyps.

Based on currently available third party data and our internal analyses, we believe that approximately 74% of commercially insured lives are in a plan in which XHANCE is covered in a Tier 3 formulary position, and approximately 65% of commercially insured lives are in a plan that covers XHANCE in a Tier 3 formulary position that is either unrestricted or requires a single step edit or simple PA for prior use of an over-the-counter or generic intranasal steroid. However, payers may change coverage levels for XHANCE or controls such as step edits and PAs, positively or negatively, at any time. We have also contracted with the Centers for Medicare and Medicaid Services regarding certain government covered lives, and over time intend to pursue future coverage for other government-insured populations. Further, we have introduced a co-pay assistance program and plan to implement other patient affordability programs to appropriately support patient access to XHANCE.

As we seek to increase the number of lives covered by commercial payors, it is our objective to continue to seek Tier 3 coverage that involves a low "hassle factor" for physicians and patients. We use the term "hassle factor" to characterize the level of difficulty that physicians and patients must overcome to prescribe and fill XHANCE. We define a low "hassle factor" as Tier 3, unrestricted, Tier 3 single step edit, or Tier 3 with a simple PA requiring prior use of an over-the-counter or generic intranasal steroid - although we acknowledge that any step edit or PA involves a level of burden for physicians and patients that could negatively impact XHANCE utilization. Our goal is for 75% of commercially insured lives to have access to XHANCE in a Tier 3 formulary position with a low "hassle factor" by the end of 2018.

- Infrastructure. We continue to develop our internal capabilities and grew from 21 employees as of January 1, 2017 to 89 employees as of June 1, 2018 to support the launch of XHANCE. We have implemented an enterprise resource planning system to expand our operational and commercial finance capabilities. We have implemented a robust healthcare compliance program to guide our staff's and our partners' compliance with rules and regulations regarding pharmaceutical sales. And in managing our growth, we have remained focused on fostering our One Mission culture.

### XHANCE Development Update

In addition to XHANCE's existing indication for nasal polyps, we plan to initiate a clinical program to seek a supplemental indication for the treatment of chronic sinusitis in the United States in order to broaden our market opportunity. We have prepared a draft clinical trial protocol and submitted it to the FDA in conjunction with a meeting request to discuss key elements of the program. Pending FDA feedback, we expect to initiate the clinical program in the fourth quarter of 2018.

### *Risks Associated with our Business*

Our ability to implement our business strategy is subject to numerous risks and uncertainties. You should carefully consider all of the information set forth in this prospectus and in the documents incorporated by reference in this prospectus prior to investing in our common stock. These risks are discussed more fully in the section titled "Risk Factors" beginning on page 9 immediately following this prospectus summary and beginning

on page 39 of our 2017 Annual Report and on page 26 of our 2018 Quarterly Report, which are incorporated by reference in this prospectus. These risks include, among others, the following:

- we may not be able to successfully commercialize XHANCE;
- third-party payors may not provide sufficient coverage or adequate reimbursement for XHANCE;
- we may be unable to obtain a follow-on indication for XHANCE for the treatment of chronic sinusitis;
- the market opportunities for XHANCE may be smaller than we believe;
- we depend on third-party suppliers, manufacturers, wholesalers and distributors in order to commercialize XHANCE, and these third parties may fail to devote sufficient time and resources to the commercialization of XHANCE;
- our sales are mainly to a limited number of pharmaceutical wholesalers and changes in terms required by these wholesalers, disruptions in these relationships or a default could harm our results of operations and financial condition;
- we may never achieve profitability;
- we will likely require additional capital to fund our operations and, if we fail to obtain necessary financing, we may be unable to complete the commercialization of XHANCE and the development of our other product candidates; and
- our failure to comply with the covenants or other terms of our note purchase agreement, including as a result of events beyond our control, could result in a default under our note purchase agreement that could materially and adversely affect the ongoing viability of our business.

***Corporate Information***

We were incorporated in Delaware in May 2010. Our predecessor entity OptiNose AS was formed under the laws of Norway in September 2000. In 2010, OptiNose AS became our subsidiary as part of an internal reorganization.

Our primary executive offices are located at 1020 Stony Hill Road, Suite 300, Yardley, Pennsylvania 19067 and our telephone number is (267) 364-3500. Our website address is www.optinose.com. The information contained in, or that can be accessed through, our website is not part of this prospectus and should not be considered as part of this prospectus or in deciding whether to purchase our common stock.

## THE OFFERING

| | |
|---|---|
| Issuer | OptiNose, Inc. |
| Common stock offered by us | 2,250,000 shares (2,587,500 shares if the underwriters exercise their option to purchase additional shares in full). |
| Common stock offered by the selling stockholders | 2,250,000 shares (2,587,500 shares if the underwriters exercise their option to purchase additional shares in full). |
| Common stock to be outstanding immediately after this offering | 40,159,058 shares (40,496,558 shares if the underwriters exercise their option to purchase additional shares in full). |
| Option to purchase additional shares | We and the selling stockholders have granted to the underwriters the option, exercisable for 30 days from the date of this prospectus, to purchase up to 675,000 additional shares of common stock. |
| Use of proceeds | We estimate that the net proceeds to us from the sale of shares that we are selling in this offering, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, will be approximately $47.0 million, based on an assumed public offering price of $22.40 per share, which is the last reported sale price of our common stock on the Nasdaq Global Select Market on June 1, 2018. In addition, the selling stockholders are selling shares of common stock in this offering and we will not receive any of the proceeds from the sale of shares to be offered by the selling stockholders.<br>We intend to use the net proceeds from this offering, together with our existing cash and cash equivalents, to support the commercialization of XHANCE, to fund further development efforts for XHANCE, including the initiation of a clinical program necessary to seek approval for a follow-on indication of XHANCE for the treatment of chronic sinusitis, and for other working capital and general corporate purposes, including debt service costs.<br>See “Use of Proceeds” on page 16 of this prospectus for a more complete description. |
| Risk factors | You should read the “Risk Factors” section beginning on page 9 of this prospectus and in the documents incorporated by reference herein for a discussion of certain of the factors to consider carefully before deciding to purchase any shares of our common stock. |
| Nasdaq Global Select Market Symbol | “OPTN” |

Unless otherwise indicated, the number of shares of our common stock to be outstanding after this offering is based on 37,909,058 shares of common stock outstanding as of March 31, 2018, and excludes:

- 6,309,453 shares of common stock issuable upon the exercise of stock options outstanding as of March 31, 2018 at a weighted-average exercise price of $9.74 per share;
- 37,800 shares of common stock issuable upon the exercise of stock options granted since March 31, 2018 at a weighted-average exercise price of $21.51 per share;
- 1,890,489 shares of common stock issuable upon the exercise of warrants to purchase common stock outstanding as of March 31, 2018 at an exercise price of $8.16 per share;
- 304,401 shares of common stock issued upon the exercise of stock options subsequent to March 31, 2018 at a weighted average exercise price of $2.25 per share;

- § 7,098 shares of common stock issued upon the exercise of warrants subsequent to March 31, 2018 at an exercise price of $8.16 per share;
- § 1,884,403 shares of common stock reserved for future issuance under our Amended and Restated 2010 Stock Incentive Plan, or the 2010 Plan, as of March 31, 2018, as well as any automatic increases in the number of shares of common stock reserved for future issuance under the 2010 Plan; and
- § 522,420 shares of common stock reserved for future issuance under our 2017 Employee Stock Purchase Plan, or the 2017 ESPP, as of March 31, 2018, as well as any automatic increases in the number of shares of common stock reserved for future issuance under the 2017 ESPP.

Unless otherwise indicated, all information in this prospectus assumes no exercise of the outstanding options and warrants described above and no exercise by the underwriters of their option to purchase up to an additional 675,000 shares of our common stock from us and the selling stockholders in this offering.

## SUMMARY CONSOLIDATED FINANCIAL DATA

The following tables set forth, for the periods and as of the date indicated, our summary consolidated financial data. The statement of operations data for the years ended December 31, 2015, 2016 and 2017 are derived from our audited consolidated financial statements incorporated by reference into this prospectus from our 2017 Annual Report. The consolidated balance sheet data as of March 31, 2018 and the statements of operations data for the three months ended March 31, 2018 and 2017 have been derived from our unaudited consolidated financial statements incorporated by reference into this prospectus from our 2018 Quarterly Report. These unaudited consolidated financial statements have been prepared on a basis consistent with our audited consolidated financial statements and, in our opinion, contain all adjustments, consisting of normal and recurring adjustments, necessary for the fair statement of such financial data. Our historical results are not necessarily indicative of our future results, and our operating results for the three months ended March 31, 2018 are not necessarily indicative of the results that may be expected for the year ending December 31, 2018 or any other interim periods or any future year or period. The summary consolidated financial data should be read together with our financial statements and related notes, “Selected Consolidated Financial Data” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” included elsewhere in this prospectus or incorporated herein by reference.

| | Years Ended December 31, | | | Three Months Ended March 31, | |
|---|---|---|---|---|---|
| **(in thousands, except share and per share data)** | **2015** | **2016** | **2017** | **2017** | **2018** |
| **Consolidated Statement of Operations Data:** | | | | | |
| Net product revenues | $ — | $ — | $ — | $ — | $ 865 |
| Licensing revenues | 85 | 47,500 | — | — | — |
| Total revenues | 85 | 47,500 | — | — | 865 |
| Cost of product sales | — | — | — | — | 200 |
| Gross margin | 85 | 47,500 | — | — | 665 |
| Operating expenses: | | | | | |
| Research and development | 22,156 | 15,311 | 16,832 | 4,230 | 1,701 |
| Selling, general and administrative | 6,006 | 6,869 | 31,698 | 3,073 | 28,011 |
| Total operating expenses | 28,162 | 22,180 | 48,530 | 7,303 | 29,712 |
| (Loss) income from operations | (28,077) | 25,320 | (48,530) | (7,303) | (29,047) |
| Other expense, net: | 237 | 2,707 | 372 | 772 | 1,525 |
| Net (loss) income | (28,314) | 22,613 | (48,902) | (8,075) | (30,572) |
| Deemed dividend | (9,992) | (11,005) | (11,969) | (3,067) | — |
| Accretion of redeemable convertible preferred stock | (2,069) | (2,109) | (1,096) | (528) | — |
| Net (loss) income attributable to common stockholders | $ (40,375) | $ 9,499 | $ (61,967) | $ (11,670) | $ (30,572) |
| Net (loss) income per share of common stock [(1)], | | | | | |
| basic | $ (9.97) | $ 0.40 | $ (5.63) | $ (2.87) | $ (0.81) |
| diluted | $ (9.97) | $ 0.32 | $ (5.63) | $ (2.87) | $ (0.81) |
| Weighted average common shares outstanding, | | | | | |
| basic | 4,049,668 | 4,054,316 | 10,999,121 | 4,067,717 | 37,849,199 |
| diluted | 4,049,668 | 4,980,181 | 10,999,121 | 4,067,717 | 37,849,199 |

(1) See (a) Note 3 to our consolidated financial statements in our 2017 Annual Report and (b) Note 3 to our unaudited consolidated financial statements included in our 2018 Quarterly Report, each of which is incorporated by reference in this prospectus, for an explanation of the method used to calculate basic and diluted net loss per common share attributable to common stockholders.

| | As of March 31, 2018 | |
|---|---|---|
| **(in thousands)** | **Actual** | **As Adjusted[(1)(2)]** |
| **Consolidated Balance Sheet Data:** | | |
| Cash and cash equivalents | $ 209,771 | $ 256,732 |
| Working Capital [(3)] | 194,581 | 241,542 |
| Total assets | 220,562 | 267,523 |
| Long-term debt, net | 71,963 | 71,963 |
| Additional paid-in capital | 368,018 | 414,977 |
| Accumulated deficit | (241,841) | (241,841) |
| Total stockholders' equity | 126,111 | 173,072 |

(1) The as adjusted column reflects the receipt of the net proceeds from the sale of shares of our common stock by us in this offering at an assumed public offering price of $22.40 per share, the last reported sale price of our common stock on the Nasdaq Global Select Market on June 1, 2018, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. We will not receive proceeds from the sale of the shares by the selling stockholders; accordingly, there is no impact upon the as adjusted consolidated balance sheet data for these sales.

(2) Each $1.00 increase (decrease) in the assumed public offering price of $22.40 per share, the last reported sale price of our common stock on the Nasdaq Global Select Market on June 1, 2018, would increase (decrease) each of cash and cash equivalents, working capital, total assets and total stockholders' equity by $2.1 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting the estimated underwriting discounts and commissions payable by us. We may also increase or decrease the number of shares we are offering. Similarly, each increase (decrease) of 1.0 million in the number of shares offered by us would increase (decrease) each of cash and cash equivalents, working capital, total assets and total stockholders' equity by $21.1 million, assuming that the assumed public offering price remains the same, and after deducting the estimated underwriting discounts and commissions payable by us. The as adjusted information discussed above is illustrative only and will be adjusted based on the actual public offering price and other terms of this offering determined at pricing. We will not receive proceeds from the sale of the shares by the selling stockholders; accordingly, there is no impact upon the as adjusted consolidated balance sheet data for these sales.

(3) Working capital is calculated as current assets minus current liabilities.

# RISK FACTORS

*An investment in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below, as well as those set forth under the heading “Risk Factors” in our 2017 Annual Report and our 2018 Quarterly Report, which are incorporated by reference in this prospectus. Our business, operating results, financial condition or prospects could be materially and adversely affected by any of these risks and uncertainties. In that case, the trading price of our common stock could decline and you might lose all or part of your investment. In addition, the risks and uncertainties discussed below are not the only ones we face. Our business, operating results, financial condition or prospects could also be harmed by risks and uncertainties not currently known to us or that we currently do not believe are material, and these risks and uncertainties could result in a complete loss of your investment. In assessing the risks and uncertainties described below, you should also refer to the other information contained in this prospectus and the documents incorporated by reference in this prospectus, including our consolidated financial statements and the related notes thereto, before making a decision to invest in our common stock.*

## Risks Related to This Offering and Ownership of Our Common Stock

***We will likely require additional capital to fund our operations and, if we fail to obtain necessary financing, we may be unable to complete the commercialization of XHANCE and the development of our other product candidates.***

Our operations have consumed substantial amounts of cash. To date, we have financed our operations primarily through the sale and issuance of common and preferred stock, debt, licensing revenues under the license agreement with respect to AVP-825 and research grants. We expect to continue to spend substantial amounts to commercialize XHANCE and to advance the clinical development of XHANCE for the treatment of chronic sinusitis and our other product candidates. As of March 31, 2018, we had cash and cash equivalents of $209.8 million. We believe our existing cash and cash equivalents, together with the net proceeds to us from this offering, will provide sufficient capital to allow us to continue to service our debt and become profitable. This includes the continued implementation of our business strategy, including funding the commercialization of XHANCE, proposed product development, debt service obligations and other working capital and general corporate purposes. However, we can give no assurance that we will not need to raise additional capital in the future and we could deplete our available capital resources sooner than we currently expect.

Our future funding requirements, both near and long-term, will depend on many factors, including, but not limited to:

- the success of our commercialization of XHANCE for the treatment of nasal polyps including, among other things, patient and physician acceptance of XHANCE and our ability to obtain adequate coverage and reimbursement for XHANCE (market access);
- the cost and timing of commercialization activities for XHANCE, including product manufacturing, marketing, sales and distribution;
- revenue received from commercial sales of XHANCE;
- our clinical development plans for XHANCE, including FDA-mandated pediatric studies and clinical program for the follow-on indication for the treatment of chronic sinusitis;
- the outcome, timing and cost of the regulatory approval process of XHANCE for chronic sinusitis by the FDA, including the potential for the FDA to require that we perform more studies and clinical trials than those that we currently expect;
- the costs involved in preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights;
- the cost of defending intellectual property disputes, including patent infringement actions brought by third parties against us;
- potential future licensing revenue from the license agreement for AVP-825;

- fluctuations in the three-month LIBOR-based floating interest rate of our senior secured notes;
- the initiation, progress, timing, costs and results of clinical trials for our other product candidates; and
- the extent to which we in-license or acquire other products, product candidates or technologies.

We cannot be certain that additional funding will be available when needed on acceptable terms, or at all. If we are unable to raise additional capital in sufficient amounts, when required or on acceptable terms, we also could be required to:

- seek strategic collaborations to assist in the commercialization of XHANCE in the United States and other markets;
- significantly delay, scale back or discontinue the development of XHANCE for the treatment of chronic sinusitis;
- relinquish or license on unfavorable terms our rights to an Optinose EDS technology or other product candidates that we otherwise would seek to develop or commercialize ourselves;
- delay, limit, reduce or terminate the drug development of our current or future product candidates, or seek collaborators for one or more of our current or future product candidates at an earlier stage than otherwise would be desirable or on terms that are less favorable than might otherwise be available; or
- significantly curtail our operations.

Although we have the ability to obtain an additional $25 million through the issuance of additional senior secured notes pursuant to our note purchase agreement, the availability of this $25 million is subject to certain conditions that we may not be able to meet.

***You will experience immediate and substantial dilution in the book value of the shares that you purchase in this offering.***

The assumed public offering price is substantially higher than the net tangible book value per share of our common stock immediately following this offering based on the total value of our tangible assets less our total liabilities. Therefore, if you purchase shares of our common stock in this offering at the assumed public offering price of $22.40 per share, the last reported sale price of our common stock on the Nasdaq Global Select Market on June 1, 2018, you will experience immediate dilution of $18.09 per share, the difference between the price per share you pay for our common stock in this offering and our net tangible book value per share as of March 31, 2018, after giving effect to the issuance of shares of our common stock in this offering. As a result of the dilution to investors purchasing shares in this offering, investors may receive significantly less than the purchase price paid in this offering, if anything, in the event of our liquidation. See “Dilution.”

In addition, as of March 31, 2018, we had outstanding stock options to purchase an aggregate of 6,309,453 shares of common stock at a weighted average exercise price of $9.74 per share and outstanding warrants to purchase an aggregate of 1,890,489 shares of common stock at a weighted average exercise price of $8.16 per share. To the extent these outstanding options or warrants are exercised, there will be further dilution to investors in this offering.

***Substantial future sales of shares of our common stock could cause the market price of our common stock to decline.***

The market price of our common stock could decline as a result of substantial sales of our common stock, particularly sales by our directors, executive officers and significant stockholders, a large number of shares of our common stock becoming available for sale or the perception in the market that holders of a large number of shares intend to sell their shares. After this offering, there will be 40,159,058 shares of our common stock outstanding, based on the number of shares outstanding as of March 31, 2018, including all of the shares to be sold by us and any shares sold by the selling stockholders, which may be resold in the public market immediately.

In connection with this offering, all of our executive officers and directors and the selling stockholders have agreed with the underwriters in this offering, that for 90 days after the date of this prospectus, subject to certain exceptions and sales by the selling stockholders in this offering, we and they will not, directly or indirectly, dispose of any of our common stock or securities convertible into or exercisable or exchangeable for our common stock.

Upon completion of this offering, based on the number of shares outstanding as of March 31, 2018, we will have 40,159,058 shares of common stock outstanding, assuming the underwriters do not exercise their option to purchase additional shares. Of these shares, 21,695,705 shares of our common stock will be freely tradable without restriction or further registration under the Securities Act of 1933, as amended, or the Securities Act, after this offering unless held by our "affiliates," as that term is defined in Rule 144 under the Securities Act. Subject to the provisions of Rule 144 under the Securities Act and applicable lock-up agreements, our remaining shares of common stock will be available for sale in the public market beginning on the 91st day following the date of this prospectus upon expiration of lock-up agreements entered into in connection with this offering, as described below.

In addition, as of March 31, 2018, there were 6,309,453 shares of common stock subject to outstanding options and 1,890,489 shares of common stock to be issued upon the exercise of outstanding warrants. As of March 31, 2018, we have also reserved (i) 1,884,403 shares of our common stock for future issuance under the 2010 Plan and (ii) 522,420 shares of our common stock for future issuance under the 2017 Plan, each of which also includes an evergreen provision that automatically increases the number of shares reserved for future issuance under the applicable plan each year. Accordingly, these shares may be freely sold in the public market upon issuance as permitted by any applicable vesting requirements, subject to the lock-up agreements described above and compliance with applicable securities laws.

In addition, certain holders of shares of our common stock have rights, subject to some conditions and the lock-up arrangements described above, to require us to file registration statements for public resale or to include such shares in registration statements that we may file for ourselves or other stockholders. See "Shares Eligible for Future Sale-Registration Rights." If we were to register the resale of these shares, they could be freely sold in the public market without limitation. If these additional shares are sold, or if it is perceived that they will be sold, in the public market, the trading price of our common shares could decline.

Further, we may issue shares of our common stock or securities convertible into our common stock from time to time in connection with a financing, acquisition, investment or otherwise. Any such issuance could result in substantial dilution to our existing stockholders and cause the trading price of our common stock to decline.

***We will have broad discretion in the use of the net proceeds to us from this offering and may invest or spend the proceeds in ways with which you do not agree and in ways that may not increase the value of your investment.***

We will have broad discretion in the application of the net proceeds to us from this offering, and you will be relying on the judgment of our management regarding the application of these proceeds. You may not agree with our decisions, and our management may not apply the net proceeds to us from this offering in ways that ultimately increase the value of your investment. We expect to use the net proceeds to us from this offering in the manner described in the "Use of Proceeds" section of this prospectus. Our failure to apply these net proceeds effectively could result in financial losses that could have a material adverse effect on our business, cause the price of our common stock to decline and delay or negatively impact the commercialization of XHANCE or the development and commercialization of our product candidates. Pending their use, we intend to invest the net proceeds to us from this offering in short- and intermediate-term, interest bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government. These investments may not yield a favorable return to our stockholders. If we do not invest or apply the net proceeds to us from this offering in ways that enhance stockholder value, we may fail to achieve expected financial results and it could compromise our ability to commercialize XHANCE or develop and commercialize our product candidates, either of which could cause the price of our common stock to decline.

***Our principal stockholders and management own a substantial majority of our common stock prior to this offering and will continue to be able to exert significant control over matters subject to stockholder approval after this offering, which could prevent new investors from influencing significant corporate decisions.***

Upon the closing of this offering, our executive officers, directors, beneficial owners of 5% or more of our capital stock and their respective affiliates will, in the aggregate, beneficially own approximately 78% of our outstanding common stock, including Avista Capital Partners II, L.P., Avista Capital Partners (Offshore) II, L.P. and Avista Capital Partners (Offshore) II-A, L.P., or collectively Avista, our largest stockholder, assuming no exercise of the underwriters' option to purchase additional shares. This may prevent or discourage unsolicited acquisition proposals or offers for our common stock that you may feel are in your best interest. The interests of Avista may not always coincide with your interests or the interests of other stockholders and Avista may act in a manner that advances its best interests and not necessarily those of other stockholders, including seeking a premium value for their common stock. For instance, under the terms of our fourth amended and restated certificate of incorporation, neither Avista nor any of its representatives on our board of directors are required to offer us any transaction opportunity of which they become aware, and they could take any such opportunity for themselves or offer it to other companies in which they have an investment, unless that opportunity is expressly offered to a person serving on our board of directors solely in his or her capacity as one of our directors. These actions might affect the prevailing market price for our common stock. In addition, because Avista purchased its shares at prices substantially below the price at which shares are being sold in this offering and have held its shares for a longer period, Avista may be more interested in selling our company to an acquirer than other investors, or Avista may want us to pursue strategies that deviate from the interests of other stockholders. Such concentration of ownership control may also:

- delay, defer or prevent a change in control;
- entrench our management and/or the board of directors; or
- impede a merger, consolidation, takeover or other business combination involving us that other stockholders may desire.

We may also take actions that our other stockholders do not view as beneficial, which may adversely affect our results of operations and financial condition and cause the value of your investment to decline.

***Because we do not anticipate paying any cash dividends on our capital stock in the foreseeable future, capital appreciation, if any, will be your sole source of gain and you may never receive a return on your investment.***

We have never declared or paid cash dividends on our capital stock, and you should not rely on an investment in our common stock to provide dividend income. We currently intend to retain all of our future earnings, if any, to finance the growth and development of our business and do not anticipate declaring or paying any cash dividends for the foreseeable future. In addition, our note purchase agreement prohibits us, and the terms of any future debt agreements may also preclude us, from paying dividends. As a result, capital appreciation, if any, of our common stock will be your sole source of gain for the foreseeable future.

## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference in this prospectus, particularly in the sections titled "Prospectus Summary" and "Risk Factors" in this prospectus and the sections titled "Risk Factors," "Management's Discussion and Analysis of Financial Conditions and Results of Operations" and "Business" in our 2017 Annual Report and 2018 Quarterly Report, which are incorporated by reference in this prospectus, contain forward-looking statements that involve substantial risks and uncertainties. All statements other than statements of historical facts contained in this prospectus and in the documents incorporated by reference in this prospectus, including statements regarding our future financial condition, results of operations, business strategy and plans and objectives of management for future operations, as well as statements regarding industry trends, are forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as "believe," "will," "may," "estimate," "continue," "anticipate," "intend," "should," "plan," "expect," "predict," "could," "potentially" or the negative of these terms or other similar expressions. We have based these forward-looking statements largely on our current expectations and projections about future events and trends that we believe may affect our financial condition, results of operations, business strategy and financial needs. These forward-looking statements are subject to a number of risks, uncertainties and assumptions described under the section titled "Risk Factors" in this prospectus and in our 2017 Annual Report and 2018 Quarterly Report, which are incorporated by reference in this prospectus, and elsewhere in this prospectus and in the documents incorporated by reference in this prospectus, regarding, among other things:

- the potential advantages of XHANCE and our product candidates;
- the potential benefits of our Xperience Program and its potential effect on future financial results;
- our goal for 75% of commercially insured lives to have access to XHANCE in a Tier 3 formulary position with a low "hassle factor" by the end of 2018;
- our commercial initiatives and objectives related to XHANCE and our product candidates;
- our planned product development activities, studies and clinical trials, including our plans to initiate a clinical program of XHANCE in the fourth quarter of 2018 in pursuit of a supplemental indication for chronic sinusitis;
- our expectation that our existing cash and cash equivalents and the net proceeds to us from this offering will provide sufficient capital to us to allow us to continue to service our debt and become profitable;
- our expectation that our operating expenses in 2018 will be in the range of $119.0 - $125.0 million;
- the rate and degree of market acceptance of XHANCE and our product candidates;
- the size and growth potential of the markets for XHANCE and our product candidates, and our ability to service those markets;
- our ability to maintain regulatory approval of XHANCE and our product candidates;
- our ability to attract collaborators with development, regulatory and commercialization expertise;
- regulatory developments in the United States and foreign countries;
- our ability to operate our business without infringing the intellectual property rights of others;
- the scope and duration of patent protection and other barriers to entry that we expect to benefit XHANCE and our product candidates;
- the performance of our third-party suppliers, manufacturers and contract sales organizations;
- the success of competing products that are or become available;

- our expectations regarding our ability to obtain and adequately maintain sufficient intellectual property protection for XHANCE and our other product candidates and to avoid claims of infringement;
- our expectations regarding the period during which we qualify as an emerging growth company under the Jumpstart Our Business Startups Act of 2012, or the JOBS Act;
- our use of proceeds from this offering; and
- the accuracy of our estimates regarding expenses, future revenue, capital requirements and need for additional financing.

Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. Given these uncertainties, you should not place undue reliance on these forward-looking statements. The Private Securities Litigation Reform Act of 1995 and Section 27A of the Securities Act of 1933, as amended, or the Securities Act, do not protect any forward-looking statements that we make in connection with this offering. Any forward-looking statements that we make in this prospectus speak only as of the date of such statement, and we undertake no obligation to update such statements to reflect events or circumstances after the date of this prospectus or to reflect the occurrence of unanticipated events. Comparisons of results for current and any prior periods are not intended to express any future trends or indications of future performance, unless expressed as such, and should only be viewed as historical data.

You should read this prospectus, the documents incorporated by reference in this prospectus and the documents that we have filed as exhibits to the registration statement on Form S-1, of which this prospectus is a part, that we have filed with the Securities and Exchange Commission, or SEC, with the understanding that our actual future results may be materially different from what we expect. We qualify all of the forward-looking statements in this prospectus by these cautionary statements.

Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to update the reasons actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future.

## IMPLICATIONS OF BEING AN EMERGING GROWTH COMPANY

We are an “emerging growth company,” as defined in the JOBS Act. We will remain an emerging growth company until the earliest of:

- the beginning of the first fiscal year following the fifth anniversary of our initial public offering, or January 1, 2023;
- the beginning of the first fiscal year after our annual gross revenue is $1.07 billion or more;
- the date on which we have, during the previous three-year period, issued more than $1.0 billion in non-convertible debt securities; and
- the end of any fiscal year in which the market value of our common stock held by non-affiliates exceeded $700.0 million as of the end of the second quarter of that fiscal year.

For as long as we remain an “emerging growth company,” we may take advantage of certain exemptions from various reporting requirements that are applicable to public companies that are not “emerging growth companies,” including:

- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act relating to the effectiveness of our internal control over financial reporting;
- reduced disclosure obligations regarding executive compensation and financial statements in our periodic reports, proxy statements and registration statements; and
- exemptions from the requirements of holding a nonbinding advisory vote to approve executive compensation and stockholder approval of any golden parachute payments not previously approved.

We have elected to take advantage of these reporting exemptions and, therefore, the information that we provide stockholders may be different than what you might obtain from other public companies in which you hold equity interests.

The JOBS Act provides that an “emerging growth company” can take advantage of an extended transition period for complying with new or revised accounting standards. We have irrevocably elected not to avail ourselves of this exemption and, therefore, we are subject to the same new or revised accounting standards as other public companies that are not “emerging growth companies.”

## MARKET, INDUSTRY AND OTHER DATA

This prospectus and the documents incorporated by reference in this prospectus contain estimates, projections and other information concerning our industry, our business, the prospective markets for XHANCE and our product candidates, XHANCE market access and brand awareness, the perceptions and preferences of patients and physicians regarding certain therapies and other prescription, physician, patient and payor data, as well as data regarding market research, estimates and forecasts prepared by our management. We obtained the industry, market and other data throughout this prospectus and in the documents incorporated by reference in this prospectus from our own internal estimates and research, as well as from industry publications and research, surveys and studies conducted by third parties on our behalf.

Information that is based on estimates, forecasts, projections, market research or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances that are assumed in this information. In several cases, we do not expressly refer to the sources from which this data is derived.

## USE OF PROCEEDS

We estimate that we will receive net proceeds of $47.0 million, or $54.1 million if the underwriters exercise their option to purchase additional shares in full, from the sale of the shares of common stock offered by us in this offering, based on an assumed public offering price of $22.40 per share, which is the last reported sale price of our common stock on the Nasdaq Global Select Market on June 1, 2018, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. We will not receive any proceeds from the sale of shares of our common stock by the selling stockholders.

A $1.00 increase (decrease) in the assumed public offering price of $22.40 per share would increase (decrease) the net proceeds to us from this offering by $2.1 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions payable by us.

Similarly, a 1.0 million share increase (decrease) in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase (decrease) the net proceeds to us by $21.1 million, assuming no change in the assumed public offering price after deducting the estimated underwriting discounts and commissions payable by us.

We intend to use the net proceeds from this offering, together with our existing cash and cash equivalents, to support the commercialization of XHANCE, to fund further development efforts for XHANCE, including the initiation of a clinical program necessary to seek approval for a follow-on indication of XHANCE for the treatment of chronic sinusitis, and for other working capital and general corporate purposes, including debt service costs.

The expected use of the net proceeds to us from this offering represents our intentions based upon our current plans and business conditions, which could change in the future as our plans and business conditions evolve. The amounts and timing of our actual expenditures depend on numerous factors, including the success of our commercialization efforts, the progress of our clinical development efforts for XHANCE for a follow-on indication for the treatment of chronic sinusitis. As a result, our management will have broad discretion in applying the net proceeds to us from this offering. An investor will not have the opportunity to evaluate the economic, financial or other information on which we base our decisions on how to use the net proceeds.

Although we may use a portion of the net proceeds to us from this offering for the acquisition or licensing, as the case may be, of products, product candidates, technologies, compounds, other assets or complementary businesses, we have no current understandings, agreements or commitments to do so. Pending these uses, we plan to invest the net proceeds to us from this offering in short- and intermediate-term, interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government.

Although it is difficult to predict future liquidity requirements, we believe that the net proceeds to us from this offering, together with our existing cash resources, will provide sufficient capital to allow us to continue to service our debt and become profitable. This includes the continued implementation of our business strategy, including funding the commercialization of XHANCE, proposed product development, debt service obligations and other working capital and general corporate purposes. However, we may need to raise additional capital in the future through public offerings and private placements of our equity securities, debt financings, strategic partnerships, alliances and licensing arrangements, or a combination thereof.

## MARKET PRICE OF OUR COMMON STOCK

Our common stock has been publicly traded on the Nasdaq Global Select Market under the symbol “OPTN” since October 13, 2017. Prior to that time, there was no public market for our common stock. The shares of our common stock sold in our initial public offering on October 12, 2017 were priced at $16.00 per share. The following table sets forth the high and low sales price of our common stock, as reported by the Nasdaq Global Select Market for the periods indicated:

| | High | Low |
|---|---|---|
| **Year Ended December 31, 2017** | | |
| Fourth Quarter (beginning October 13, 2017) | $ 21.46 | $ 15.01 |
| **Year Ending December 31, 2018** | | |
| First Quarter | $ 25.24 | $ 15.50 |
| Second Quarter (through June 1, 2018) | $ 25.74 | $ 17.87 |

On June 1, 2018, the last reported sale price of our common stock on the Nasdaq Global Select Market was $22.40 per share. As of March 31, 2018, we had 42 holders of record of our common stock. This figure does not reflect the beneficial ownership or shares held in nominee name.

## DIVIDEND POLICY

We have never paid or declared any cash dividends on our common stock, and we do not anticipate paying any cash dividends on our common stock in the foreseeable future. We currently intend to retain all available funds and any future earnings to support our operations and finance the growth and development of our business. Any future determination related to our dividend policy will be made at the discretion of our board of directors and will depend upon, among other factors, our results of operations, financial condition, capital requirements, contractual restrictions, business prospects and other factors our board of directors may deem relevant. The terms of our outstanding credit facility also restrict our ability to pay dividends, and we may also enter into credit agreements or other borrowing arrangements in the future that will restrict our ability to declare or pay cash dividends on our capital stock.

## CAPITALIZATION

The following table sets forth our cash and cash equivalents and our capitalization as of March 31, 2018 on:

- an actual basis; and
- an as adjusted basis, giving effect to the sale by us of 2,250,000 shares of our common stock in this offering at an assumed public offering price of $22.40 per share, which is the last reported sale price on the Nasdaq Global Select Market on June 1, 2018, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The as adjusted information below is illustrative only, and our capitalization following the closing of this offering will depend on the actual public offering price and other terms of this offering determined at pricing.

You should read this table together with the sections of this prospectus titled “Summary Consolidated Financial Data,” and “Description of Capital Stock” and “Selected Consolidated Financial Data,” and the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” our audited consolidated financial statements and related notes in our 2017 Annual Report and our unaudited consolidated financial statements and related notes in our 2018 Quarterly Report, which are incorporated by reference in this prospectus.

| | As of March 31, 2018 | |
|---|---|---|
| **(in thousands, except share data)** | **Actual** | **As Adjusted** |
| Cash and cash equivalents | $ 209,771 | $ 256,732 |
| | | |
| Long-term debt, net | $ 71,963 | $ 71,963 |
| Stockholder's equity: | | |
| Common stock, par value $.0.001 per share 200,000,000 shares authorized, 37,909,058 shares issued and outstanding, actual; 200,000,000 shares authorized, 40,159,058 shares issued and outstanding, as adjusted | 38 | $ 40 |
| Preferred stock, par value $0.001 per share; 5,000,000 shares authorized, no shares issued or outstanding, actual; 5,000,000 shares authorized, no shares issued and outstanding, as adjusted | — | — |
| Additional paid-in capital | 368,018 | 414,977 |
| Accumulated deficit | (241,841) | (241,841) |
| Accumulated other comprehensive loss | (104) | (104) |
| Total stockholders' equity | 126,111 | 173,072 |
| Total capitalization | $ 198,074 | $ 245,035 |

(1) Each $1.00 increase (decrease) in the assumed public offering price of $22.40 per share, which is the last reported sale price of our common stock on the Nasdaq Global Select Market on June 1, 2018, would increase (decrease) the amount of each of cash and cash equivalents, additional paid-in capital, total stockholders’ equity and total capitalization on an as adjusted basis by $2.1 million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions payable by us. We may also increase or decrease the number of shares we are offering. Similarly, each increase (decrease) of 1,000,000 shares offered by us would increase (decrease) the amount of each of cash and cash equivalents, total stockholders’ equity and total capitalization on an as adjusted basis by $21.1 million, assuming the

assumed public offering price remains the same, and after deducting the estimated underwriting discounts and commissions payable by us.

Unless otherwise indicated, the number of shares of our common stock to be outstanding after this offering is based on 37,909,058 shares of common stock outstanding as of March 31, 2018, and excludes:

- 6,309,453 shares of common stock issuable upon the exercise of stock options outstanding as of March 31, 2018 at a weighted-average exercise price of $9.74 per share;
- 37,800 shares of common stock issuable upon the exercise of stock options granted since March 31, 2018 at a weighted-average exercise price of $21.51 per share;
- 1,890,489 shares of common stock issuable upon the exercise of warrants to purchase common stock outstanding as of March 31, 2018 at an exercise price of $8.16 per share;
- 304,401 shares of common stock issued upon the exercise of stock options subsequent to March 31, 2018 at a weighted average exercise price of $2.25 per share;
- 7,098 shares of common stock issued upon the exercise of warrants subsequent to March 31, 2018 at an exercise price of $8.16 per share;
- 1,884,403 shares of common stock reserved for future issuance under our 2010 Plan, as of March 31, 2018, as well as any automatic increases in the number of shares of common stock reserved for future issuance under the 2010 Plan; and
- 522,420 shares of common stock reserved for future issuance under our 2017 ESPP, as of March 31, 2018, as well as any automatic increases in the number of shares of common stock reserved for future issuance under the 2017 ESPP.

## DILUTION

If you invest in our common stock in this offering, your ownership interest will be immediately diluted to the extent of the difference between the public offering price per share of our common stock and the as adjusted net tangible book value per share of our common stock after this offering.

As of March 31, 2018, our historical net tangible book value was $126.1 million, or $3.33 per share of our common stock. Our historical net tangible book value is the amount of our total tangible assets less our liabilities. Historical net tangible book value per share is our historical net tangible deficit divided by the number of shares of common stock outstanding as of March 31, 2018.

Our as adjusted net tangible book value as March 31, 2018, which is our net tangible book value at that date, after giving effect to the sale of shares of our common stock in this offering by us at an assumed public offering price of $22.40 per share, which is the last reported sale price of our common stock on the Nasdaq Global Select Market on June 1, 2018, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, would have been $173.1 million, or $4.31 per share. This represents an immediate increase in as adjusted net tangible book value of $0.98 per share to our existing stockholders and an immediate dilution of $18.09 per share to investors participating in this offering. Dilution per share to investors participating in this offering is determined by subtracting as adjusted net tangible book value per share after this offering from the assumed public offering price per share paid by investors in this offering.

The following table illustrates this dilution on a per share basis:

| | | |
|---|---|---|
| Assumed public offering price per share | | $22.40 |
| Historical net tangible book value per share as of March 31, 2018 | $ 3.33 | |
| Increase in net tangible book value per share attributable to investors participating in this offering | 0.98 | |
| As adjusted net tangible book value per share after this offering | | 4.31 |
| Dilution per share to new investors participating in this offering | | $18.09 |

The information discussed above is illustrative only, and the dilution information following this offering will depend on the actual public offering price and other terms of this offering determined at pricing. Each $1.00 increase (decrease) in the assumed public offering price of $22.40 per share, which is the last reported sale price of our common stock on the Nasdaq Global Select Market on June 1, 2018, would increase (decrease) the as adjusted net tangible book value per share after this offering by $0.05 per share and the dilution per share to investors participating in this offering by $0.95 per share, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions payable by us.

Similarly, each 1,000,000 share increase in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase the as adjusted net tangible book value per share after this offering by $0.41 and decrease the dilution per share to investors participating in this offering by $0.41, assuming the assumed public offering price remains the same, and after deducting the estimated underwriting discounts and commissions payable by us. A 1,000,000 share decrease in the number of shares offered by us, as set forth on the cover page of this prospectus, would decrease the as adjusted net tangible book value per share after this offering by $0.43 and increase the dilution per share to investors participating in this offering by $0.43, assuming the assumed public offering price remains the same, and after deducting the estimated underwriting discounts and commissions payable by us.

If the underwriters exercise their option to purchase 337,500 additional shares from us in full, the as adjusted net tangible book value will increase to $4.45 per share, representing an immediate increase in as adjusted net tangible book value to existing stockholders of $1.12 per share and immediate dilution of $17.95 per share to investors participating in this offering.

The number of shares of our common stock reflected in the discussion above is based on 37,909,058 shares of common stock outstanding as of March 31, 2018, and excludes:

- 6,309,453 shares of common stock issuable upon the exercise of stock options outstanding as of March 31, 2018 at a weighted-average exercise price of $9.74 per share;
- 37,800 shares of common stock issuable upon the exercise of stock options granted since March 31, 2018 at a weighted-average exercise price of $21.51 per share;
- 1,890,489 shares of common stock issuable upon the exercise of warrants to purchase common stock outstanding as of March 31, 2018 at an exercise price of $8.16 per share;
- 304,401 shares of common stock issued upon the exercise of stock options subsequent to March 31, 2018 at a weighted average exercise price of $2.25 per share;
- 7,098 shares of common stock issued upon the exercise of warrants subsequent to March 31, 2018 at an exercise price of $8.16 per share;
- 1,884,403 shares of common stock reserved for future issuance under our Amended and Restated 2010 Stock Incentive Plan, as of March 31, 2018, as well as any automatic increases in the number of shares of common stock reserved for future issuance under the 2010 Plan; and
- 522,420 shares of common stock reserved for future issuance under our 2017 ESPP, as of March 31, 2018, as well as any automatic increases in the number of shares of common stock reserved for future issuance under the 2017 ESPP.

To the extent that outstanding stock options or warrants are exercised or additional shares of common stock are issued in the future, including pursuant to additional grants under our stock incentive plans, there will be further dilution to investors participating in this offering. In addition, we may choose to raise additional capital because of market conditions or strategic considerations, even if we believe that we have sufficient funds for our current or future operating plans. If we raise additional capital through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

## SELECTED CONSOLIDATED FINANCIAL DATA

*The following tables set forth, for the periods and as of the dates indicated, our selected consolidated financial data. The consolidated statement of operations data for the years ended December 31, 2016 and 2017 and the consolidated balance sheet data as of December 31, 2016 and 2017 are derived from our audited consolidated financial statements incorporated by reference into this prospectus from our 2017 Annual Report. The consolidated balance sheet data as of December 31, 2015 and consolidated statement of operations data for the year ended December 31, 2015 have been derived from audited financial statements that are not included in our 2017 Annual Report. The consolidated balance sheet data as of March 31, 2018 and the consolidated statement of operations data for the three months ended March 31, 2017 and 2018 have been derived from our unaudited consolidated financial statements incorporated by reference into this prospectus from our 2018 Quarterly Report. These unaudited consolidated financial statements have been prepared on a basis consistent with our audited consolidated financial statements and, in our opinion, contain all adjustments, consisting of normal and recurring adjustments, necessary for the fair statement of such financial data. Our historical results are not necessarily indicative of our future results, and our operating results for the three months ended March 31, 2018 are not necessarily indicative of the results that may be expected for the year ending December 31, 2018 or any other interim periods or any future year or period. The selected consolidated financial data should be read together with our financial statements and related notes, and "Management's Discussion and Analysis of Financial Condition and Results of Operations" incorporated herein by reference.*

| (in thousands, except share and per share data) | Years ended December 31, 2015 | 2016 | 2017 | Three Months ended March 31, 2017 | 2018 |
|---|---|---|---|---|---|
| **Consolidated Statement of Operations Data:** | | | | | |
| Net product revenues | $ — | $ — | $ — | $ — | $ 865 |
| Licensing revenues | 85 | 47,500 | — | — | — |
| Total revenues | 85 | 47,500 | — | — | 865 |
| Cost of product sales | — | — | — | — | 200 |
| Gross margin | 85 | 47,500 | — | — | 665 |
| Operating expenses: | | | | | |
| Research and development | 22,156 | 15,311 | 16,832 | 4,230 | 1,701 |
| Selling, general and administrative | 6,006 | 6,869 | 31,698 | 3,073 | 28,011 |
| Total operating expenses | 28,162 | 22,180 | 48,530 | 7,303 | 29,712 |
| (Loss) income from operations | (28,077) | 25,320 | (48,530) | (7,303) | (29,047) |
| Other expense, net: | 237 | 2,707 | 372 | 772 | 1,525 |
| Net (loss) income | (28,314) | 22,613 | (48,902) | (8,075) | (30,572) |
| Deemed dividend | (9,992) | (11,005) | (11,969) | (3,067) | — |
| Accretion of redeemable convertible preferred stock | (2,069) | (2,109) | (1,096) | (528) | — |
| Net (loss) income attributable to common stockholders | $ (40,375) | $ 9,499 | $ (61,967) | $ (11,670) | $ (30,572) |
| Net (loss) income per share of common stock, | | | | | |
| basic | $ (9.97) | $ 0.40 | $ (5.63) | $ (2.87) | $ (0.81) |
| diluted | $ (9.97) | $ 0.32 | $ (5.63) | $ (2.87) | $ (0.81) |
| Weighted average common shares outstanding, | | | | | |
| basic | 4,049,668 | 4,054,316 | 10,999,121 | 4,067,717 | 37,849,199 |
| diluted | 4,049,668 | 4,980,181 | 10,999,121 | 4,067,717 | 37,849,199 |

| (in thousands) | As of December 31, 2015 | As of December 31, 2016 | As of December 31, 2017 | As of March 31, 2018 |
|---|---|---|---|---|
| **Consolidated Balance Sheet Data:** | | | | |
| Cash and cash equivalents | $ 15,198 | $ 36,797 | $ 234,854 | $ 209,771 |
| Working capital [1] | 8,624 | 34,765 | 223,390 | 194,581 |
| Total assets | 16,009 | 41,551 | 241,136 | 220,562 |
| Long-term debt, net | — | — | 71,863 | 71,963 |
| Convertible notes | 14,480 | 15,256 | — | — |
| Redeemable convertible preferred stock | 155,059 | 168,173 | — | — |
| Additional paid-in capital | — | — | 365,838 | 368,018 |
| Accumulated deficit | (161,255) | (151,102) | (211,269) | (241,841) |
| Total stockholders' equity (deficit) | (161,392) | (151,197) | 154,496 | 126,111 |

(1) Working capital is calculated as current assets minus current liabilities.

## CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

The following includes a summary of transactions since January 1, 2015 to which we have been a party in which the amount involved exceeded or will exceed $120,000, and in which any of our directors, director nominees, executive officers or beneficial owners of more than 5% of our capital stock, or any members of their immediate family, had or will have a direct or indirect material interest, other than compensation arrangements that are described in the "*Executive Compensation"* and *"Director Compensation"* sections of our Definitive Proxy Statement on Schedule 14A filed with the SEC on April 25, 2018, which is incorporated by reference in this prospectus.

### Convertible Preferred Stock Financings

In July 2014, we issued an aggregate of 1,419,781 shares of our Series C-1 Preferred Stock at a purchase price of $21.13 per share, for aggregate consideration of $30.0 million. In July 2015, we issued an additional 236,629 shares of our Series C-1 Preferred Stock at a purchase price of $21.13 per share, for aggregate consideration of $5.0 million.

In March 2017, we issued an aggregate of 1,065,451 shares of our Series D Preferred Stock at a purchase price of $32.85 per share, for aggregate consideration of $35.0 million. In April 2017 and May 2017, we issued an additional 52,127 shares of our Series D Preferred Stock at a purchase price of $32.85 per share, for aggregate consideration of $1.7 million.

In connection with the Series C-1 Preferred Stock financing in July 2015, we reimbursed Avista for $6,600 in legal fees incurred by them and an aggregate of $149,999 in funding fees incurred by Avista and the other Series C-1 Preferred Stock investors. In connection with the Series D Preferred Stock financing, we reimbursed Avista and Fidelity Investments, or Fidelity, for $36,360 and $45,076, respectively, in legal fees incurred by them.

The table below sets forth the number of shares of our Series C-1 and Series D Preferred Stock purchased by our then executive officers, directors, holders of more than 5% of our capital stock and their affiliated entities or immediate family members. Each share of our convertible preferred stock in the table below automatically converted into 2.8879 shares of our common stock upon the closing of our initial public offering in October 2017.

| Participants[1] | Shares of Series C-1 Preferred Stock | Series C-1 Convertible Preferred Stock Aggregate Purchase ($) | Shares of Series D Preferred Stock | Series D Convertible Preferred Stock Aggregate Purchase ($) |
|---|---|---|---|---|
| Avista[2] | 1,161,662 | 24,545,918 | 304,416 | 10,000,066 |
| Entrepreneurs Fund LP[3] | 113,842 | 2,405,481 | 45,662 | 1,499,997 |
| Ikos Invest AS[4] | 104,635 | 2,210,938 | 0 | 0 |
| Larry G. Pickering[5] | 20,715 | 437,708 | 0 | 0 |
| Patrick O'Neill[6] | 1,456 | 30,765 | 393 | 12,910 |
| TKWD Ventures LLC[7] | 190,440 | 4,023,997 | 0 | 0 |
| Peter K. Miller[8] | 16,564 | 349,997 | 0 | 0 |
| Ramy A. Mahmoud[9] | 16,564 | 349,997 | 0 | 0 |
| Fidelity Investments | 0 | 0 | 761,035 | 25,000,000 |
| William F. Doyle[7] | 1,142 | 24,130 | 334 | 10,972 |

(1) Additional details regarding these stockholders and their equity holdings are provided in "Principal and Selling Stockholders."
(2) Mr. Venkataraman, a member of our board of directors since 2010, Mr. Tamaroff, a member of our board of directors since March 2017, and Mr. O'Neil, a director nominee, are affiliated with Avista Capital Partners II, L.P., Avista Capital Partners (Offshore) II, L.P. and Avista Capital Partners (Offshore) II-A, L.P.
(3) Klaas de Boer, who was a member of our board of directors from 2010 to October 2017, is affiliated with Entrepreneurs Fund LP.
(4) Per Gisle Djupesland, who was a member of our board of directors from 2010 to October 2017, is affiliated with Ikos Invest AS.
(5) Mr. Pickering is the vice chairman of our board of directors.
(6) Dr. O'Neill was a member of our board of directors from 2010 to October 2017.
(7) Mr. Doyle, a member of our board of directors since 2010, is affiliated with TKWD Ventures LLC, or TKWD.
(8) Mr. Miller is our Chief Executive Officer and a member of our board of directors.
(9) Dr. Mahmoud is our President and Chief Operating Officer.

### 2015 Convertible Note Financing

In September 2015, we sold and issued an aggregate principal amount of $15.0 million of senior secured convertible notes, or the 2015 Notes. Under the terms of the 2015 Notes, we were required to pay an aggregate of $450,000 in front-end fees and $450,000 plus interest in back-end fees.

In connection with the Series D Preferred Stock financing described above, we entered into a Note Conversion Agreement with the holders of the 2015 Notes pursuant to which all of the 2015 Notes, including all principal, accrued interest and back-end fee amounts, were converted into an aggregate of 687,474 shares of our Series C-2 Preferred Stock at a conversion price of $28.40 per share.

The table below sets forth the amount of 2015 Notes purchased by our then executive officers, directors, holders of more than 5% of our capital stock and their affiliated entities or immediate family members, as well as the number of shares of Series C-2 Preferred Stock acquired by each such entity upon conversion of the 2015 Notes. Each share of our Series C-2 Preferred Stock in the table below automatically converted into 2.8879 shares of our common stock upon the closing of our initial public offering in October 2017.

| Participants(1) | Principal Amount of Notes Purchased ($) | Front-end Fees Paid by Us ($) | Back-end Fees ($) | Convertible Note Value at Conversion ($) | Shares of Series C-2 Preferred Stock Issued Upon Conversion |
|---|---|---|---|---|---|
| Ikos Invest AS(2) | 75,000 | 2,250 | 2,844 | 97,635 | 3,437 |
| Entrepreneurs Fund General Partner Limited(3) | 1,511,075 | 45,332 | 57,295 | 1,967,123 | 69,256 |
| Peter K. Miller(4) | 66,042 | 1,981 | 2,504 | 85,973 | 3,026 |
| Ramy A. Mahmoud(5) | 35,175 | 1,055 | 1,334 | 45,791 | 1,612 |
| Avista(6) | 10,902,112 | 327,063 | 413,371 | 14,192,413 | 499,670 |
| Larry G. Pickering(7) | 219,639 | 6,589 | 8,328 | 285,927 | 10,066 |
| TKWD Ventures LLC(8) | 2,019,167 | 60,575 | 76,560 | 2,628,559 | 92,543 |
| William F. Doyle(8) | 10,340 | 310 | 392 | 13,461 | 473 |

(1) Additional details regarding these stockholders and their equity holdings are provided in "Principal and Selling Stockholders."
(2) Dr. Djupesland, a member of our board of directors from 2010 to October 2017, is affiliated with Ikos Invest AS.

(3) Mr. de Boer, a member of our board of directors from 2010 to October 2017, is affiliated with Entrepreneurs Fund LP.
(4) Mr. Miller has served as our Chief Executive Officer and a member of our board of directors since 2010.
(5) Dr. Mahmoud has served as our President and Chief Operating Officer since 2010.
(6) Mr. Venkataraman, a member of our board of directors since 2010, Mr. Tamaroff, a member of our board of directors since March 2017, and Mr. O'Neil, a director nominee, are affiliated with Avista Capital Partners II, L.P., Avista Capital Partners (Offshore) II, L.P. and Avista Capital Partners (Offshore) II-A, L.P.
(7) Mr. Pickering is the vice chairman of our board of directors.
(8) Mr. Doyle, a member of our board of directors since 2010, is affiliated with TKWD.

### Second Amended and Restated Registration Rights Agreement

In connection with our Series D Preferred Stock financing in March 2017, we entered into the Second Amended and Restated Registration Rights Agreement, or the Registration Rights Agreement, with the holders of our Series B-1 Preferred Stock, Series B-2 Preferred Stock, Series C Preferred Stock, Series C-1 Preferred Stock, Series C-2 Preferred Stock and Series D Preferred Stock. We further amended the Registration Rights Agreement in connection with our initial public offering in October 2017.

Pursuant to the Registration Rights Agreement, as amended, certain holders of shares of our common stock have registration rights and certain holders of our warrants have registration rights with respect to the shares of common stock issuable upon exercise. After registration of these shares of common stock pursuant to these rights, these shares will become freely tradable without restriction under the Securities Act. The registration rights will terminate with respect to each stockholder on the date on which such stockholder ceases to beneficially own more than one percent of our shares of common stock then outstanding or can sell all of its registrable shares without limitation during a three-month period without registration pursuant to Rule 144 of the Securities Act or another similar exemption under the Securities Act.

We have complied with our obligations pursuant to the Registration Rights Agreement in connection with this offering.

### Second Amended and Restated Shareholders' Agreement

In connection with our Series D Preferred Stock financing in March 2017, we entered into the Second Amended and Restated Shareholders' Agreement, or the Shareholders' Agreement, with certain of our stockholders, including Avista, TWKD, Fidelity Investments, Entrepreneurs Fund, and certain members of our senior management team and board of directors. The Shareholders' Agreement terminated upon completion of our initial public offering in October 2017; however, the contractual lock-up obligations for certain of our stockholders upon the filing of a registration statement in connection with an underwritten offering survived for a period of 180 days following the closing of our initial offering and the confidentiality obligations with respect to our proprietary information and the proprietary information of our stockholders will survive indefinitely.

### Stockholders' Agreement

In connection with our initial public offering in October 2017, we entered into a Stockholders' Agreement with Avista that provides, among other things, that Avista has the right to designate for nomination by our board of directors upon the recommendation of our nominating and corporate governance committee:

- three directors to our board of directors for so long as Avista owns 27.5% or more of our then-outstanding shares of common stock; provided, however, that one such director must not be an employee or partner of Avista, must qualify as an independent director under the Nasdaq listing rules and must be reasonably acceptable to our board of directors;

- two directors to our board of directors for so long as Avista owns less than 27.5% but 17.5% or more of our then-outstanding shares of common stock; and

- one director to our board of directors for so long as Avista owns less than 17.5% but 7.5% or more of our then-outstanding shares of common stock.

We are required to take all necessary action to ensure the composition of our board of directors as set forth above. Pursuant to the terms of the Stockholders' Agreement, at least a majority of the members of each our of

standing committees must be composed of non-Avista nominees. The Avista nominees currently serving on our board of directors are Messrs. Pickering, Tamaroff and Venkataraman. Avista has nominated Robert O'Neil as its replacement for Mr. Pickering, whose term will expire at the 2018 annual meeting of stockholders.

### Employment of Certain Related Persons

John Pickering, the son of Larry Pickering who serves as the Vice Chairman of our board of directors, is an employee of ours. During the years ended December 31, 2015, 2016 and 2017, we paid John Pickering $247,045, $389,097, and $329,112, respectively, in cash compensation, consisting of his base salary and, with respect to 2016, an annual bonus. From January 1, 2018 through June 1, 2018, we paid John Pickering $211,518 in cash compensation, consisting of his base salary and annual bonus. John Pickering's current annual base salary for 2018 is $267,180.

Dr. Per Gisle Djupesland served as a member of our board of directors from 2010 to October 2017. Dr. Djupesland and his spouse, Helena Djupesland, are directors of Ikos Invest AS and its wholly-owned subsidiary Ikos Subsidiary AS. Ikos Invest and Ikos Subsidiary beneficially own more than 5% of our common stock. During the years ended December 31, 2015, 2016 and 2017, we paid Ms. Djupesland total cash compensation of $201,552, $193,736, and $214,242, respectively. From January 1, 2018 through June 1, 2018, we paid Ms. Djupesland total cash compensation of $102,095 for her service as the Co-Chief Executive Officer and director of our wholly-owned subsidiary OptiNose AS. Ms. Djupesland's current annual base salary for 2018 is $184,105. She also received a bonus in 2017 of $17,572 and a bonus of $18,411 in 2018. During the years ended December 31, 2015, 2016 and 2017, we paid Dr. Djupesland total cash compensation of $164,531, $172,275, and $178,833, respectively. From January 1, 2018 through June 1, 2018, we paid Dr. Djupesland total cash compensation of $87,812, for his service as the Chief Scientific Officer and director of our wholly-owned subsidiary OptiNose AS. Dr. Djupesland's current annual base salary for 2018 is $159,131. He also received a bonus in 2017 of $14,339, a bonus of $15,480 in 2018 and a grant of options to purchase 28,879 shares of our common stock in October 2017. The amounts reflected in this paragraph were based in Norwegian kroner and converted into U.S. dollars at an average exchange rate of 8.0681 kr, 8.3936 kr and 8.2679 kr per U.S. dollar for the years ended December 31, 2015, 2016 and 2017, and an average exchange rate of 7.8863 kr per U.S. dollar for the period from January 1, 2018 to May 31, 2018.

Each of John Pickering, Dr. Djupesland and Ms. Djupesland participate in our general welfare and benefit plans.

### Reimbursement of Fees to Certain Related Persons

During the year ended December 31, 2017, and from January 1, 2018 through June 1, 2018, we reimbursed Avista Capital Holdings, LP and related parties $156,546 and $15,774 in expenses, respectively, primarily related to legal fees incurred in conjunction with our initial public offering in October 2017 and our Series D Preferred Stock financing in March 2017.

### Director and Officer Indemnification Arrangements

We have entered into indemnification agreements with our directors and executive officers, in addition to the indemnification, expense advancement and limitations of liability provided for in our fourth amended and restated certificate of incorporation and our amended and restated bylaws. These indemnification agreements provide our directors and executive officers with contractual rights to indemnification and, in some cases, expense advancement in any action or proceeding arising out of their services as one of our directors or executive officers or as a director or executive officer of any other company or enterprise to which the person provides services at our request. We also maintain a directors' and officers' insurance policy pursuant to which our directors and officers are insured against liability for actions taken in their capacities as directors and officers.

### Policies and Procedures for Transactions with Related Persons

In connection with our initial public offering in October 2017, our board of directors adopted a related party transactions policy that sets forth our procedures for the identification, review, consideration and approval or ratification of related party transactions. Pursuant to this policy, we review all transactions with a dollar value in excess of $120,000 involving us in which any of our executive officers, directors, director nominees or holders of more than 5% of our capital stock, or any affiliate or member of their immediate family, is a participant.

Under the policy, if a transaction has been identified as a related party transaction, including any transaction that was not a related party transaction when originally consummated or any transaction that was not initially identified as a related party transaction prior to consummation, members of management or our directors must present information regarding the proposed related party transaction to our audit committee or, where review by our audit committee would be inappropriate due to a conflict of interest, to another independent body of our board of directors, for review, consideration and approval or ratification. The presentation must include a description of, among other things, all of the parties, the direct and indirect interests of the related persons, the purpose of the transaction, the material facts, the benefits of the transaction to us and whether any alternative transactions are available, an assessment of whether the terms are comparable to the terms available from unrelated third parties and management's recommendation. In considering whether to approve any proposed related party transactions, our audit committee or another independent body of our board of directors will take into account the relevant available facts and circumstances, including:

- the materiality and character of the related person's interest in the transaction;
- the commercial reasonableness of the terms of the transaction;
- the benefit and perceived benefit, or lack thereof, to us;
- the opportunity costs of alternate transactions; and
- the actual or apparent conflicts of interest of the related person.

All of the transactions described above were entered into prior to the adoption of this policy. Although prior to the adoption of this policy we did not have a written policy for the review and approval of transactions with related persons, our board of directors has historically reviewed and approved any transaction where a director or officer had a financial interest, including the transactions described above. Prior to approving such a transaction, the material facts as to a director's or officer's relationship or interest in the agreement or transaction were disclosed to our board of directors. Our board of directors took this information into account when evaluating the transaction and in determining whether such transaction was fair to us and in the best interest of all our stockholders.

## PRINCIPAL AND SELLING STOCKHOLDERS

The following table sets forth certain information relating to the beneficial ownership of our common stock as of May 31, 2018 by:

- each person, or group of affiliated persons, known by us to beneficially own more than 5% of our outstanding shares of common stock;
- each of our directors and director nominees;
- each of our named executive officers;
- all of our current directors and executive officers as a group; and
- the selling stockholders, which are indicated by the stockholder shown as having shares listed in the column “Shares Being Offered.”

The percentage ownership information shown in the column titled “Beneficial ownership prior to the offering” in the table is based upon 38,220,557 shares of common stock outstanding as of May 31, 2018. The percentage ownership information shown in the column titled “Beneficial ownership after the offering” in the table is based on 40,470,557 shares of common stock outstanding after this offering, assuming 2,250,000 shares of common stock being sold by us and 2,250,000 shares of common stock being sold by the selling stockholders in the offering and assuming no exercise of the underwriters’ option to purchase additional shares.

We have determined beneficial ownership in accordance with the rules of the SEC, as indicated in the footnotes to the table below.

| Name and address of beneficial owner | Beneficial ownership prior to the offering | | Shares being offered | Beneficial ownership after the offering | |
|---|---|---|---|---|---|
| | Number[1] | Percentage[2] | | Number[1] | Percentage[2] |
| **Directors, director nominees and named executive officers[3]:** | | | | | |
| Peter K. Miller[4] | 1,545,735 | 3.90% | | 1,545,735 | 3.69% |
| Ramy A. Mahmoud, M.D., M.P.H.[5] | 853,524 | 2.19% | | 853,524 | 2.07% |
| Thomas E. Gibbs[6] | 138,379 | * | | 138,379 | * |
| Keith A. Goldan[6] | 59,563 | * | | 59,563 | * |
| Michael F. Marino[6] | 54,148 | * | | 54,148 | * |
| Joseph C. Scodari | — | — | | — | — |
| Larry G. Pickering[7] | 421,499 | 1.10% | | 421,499 | 1.04% |
| William F. Doyle[8][12] | 4,530,855 | 11.41% | | 4,530,855 | 10.80% |
| Sriram Venkataraman[10] | 18,398,017 | 48.14% | 2,250,000 | 16,148,017 | 39.90% |
| Joshua A. Tamaroff | — | — | | — | — |
| Wilhelmus Groenhuysen | — | — | | — | — |
| Sandra L. Helton | — | — | | — | — |
| Robert P. O'Neil | — | — | | — | — |
| All executive officers and directors as a group (12 persons)[9] | 26,001,720 | 61.54% | 2,250,000 | 23,751,720 | 53.37% |
| **Greater than 5% stockholders:** | | | | | |
| ***Selling stockholders*** | | | | | |
| Avista[10] | 18,398,017 | 48.14% | 2,250,000 | 16,148,017 | 39.90% |
| ***Other greater than 5% stockholders*** | | | | | |
| Entities affiliated with FMR LLC[11] | 5,672,656 | 14.84% | | 5,672,656 | 14.02% |
| TKWD Ventures LLC[12] | 4,501,505 | 11.34% | | 4,501,505 | 10.73% |
| Entrepreneurs Fund LP[13] | 2,938,013 | 7.65% | | 2,938,013 | 7.22% |
| Entities affiliated with Ikos Invest AS[14] | 2,571,311 | 6.70% | | 2,571,311 | 6.33% |

* Represents beneficial ownership of less than one percent of our outstanding common stock.

(1) Beneficial ownership is determined in accordance with Rule 13d-3 under the Securities Exchange Act of 1934, the Exchange Act. A person or group is deemed to be the beneficial owner of any shares of our common stock over which such person or group has sole or shared voting or investment power, plus any shares which such person or group has the right to acquire beneficial ownership of within 60 days of May 31, 2018, whether through the exercise of options, warrants or otherwise. Unless otherwise indicated in the footnotes, each person or entity identified in the table has sole voting and investment power with respect to all shares shown as beneficially owned by them, subject to applicable community property laws.

(2) The beneficial ownership percentage is calculated for each person or group separately because shares of our common stock subject to options, warrants or other rights to acquire our common stock that are currently exercisable or exercisable within 60 days of May 31, 2018 are considered outstanding only for the purpose of calculating the percentage ownership of the person or group holding such options, warrants or other rights but not for the purpose of calculating the percentage ownership of any other person or group. The beneficial ownership percentage prior to the offering for each person or group is calculated by dividing (x) the number of shares reported in the table as beneficially owned by such person or group prior to the offering, by (y) 38,220,557 shares (which represents the number of shares of common stock that were outstanding as of May 31, 2018) plus the number of shares that such person or group has the right to acquire beneficial ownership of within 60 days of May 31, 2018 as indicated in the footnotes below. The beneficial ownership percentage for each person or group after the offering is calculated by dividing (x) the number of shares

reported in the table as beneficially owned by such person or group after the offering, by (y) 40,470,557 shares (which assumes the sale of shares of our common stock by us and the selling stockholders in this offering, assuming no exercise of the underwriters' option to purchase additional shares), plus the number of shares that such person or group has the right to acquire beneficial ownership of within 60 days of May 31, 2018.

(3) The address for each of our executive officers, directors and director nominees is c/o Optinose, 1020 Stony Hill Road, Suite 300, Yardley, Pennsylvania 19067.

(4) Consists of (i) 105,148 shares of common stock, (ii) options to purchase 1,137,358 shares of common stock exercisable within 60 days of May 31, 2018, and (iii) 303,229 shares of common stock subject to options held by the Deed of Trust of Peter K. Miller, dated October 13, 2014 that are exercisable within 60 days of May 31, 2018.

(5) Consists of (i) 52,490 shares of common stock, (ii) options to purchase 701,852 shares of common stock exercisable within 60 days of May 31, 2018, and (iii) 99,182 shares of common stock subject to options held by The Ramy Mahmoud 2014 Trust for Cynthia Mahmoud that are exercisable within 60 days of May 31, 2018.

(6) The share amounts set forth in the table consist solely of shares underlying one or more outstanding options to purchase our common stock exercisable within 60 days of May 31, 2018.

(7) Consists of (i) 382,356 shares of common stock and (ii) options to purchase an aggregate of 39,143 shares of our common stock exercisable within 60 days of May 31, 2018.

(8) Consists of (i) 18,803 shares of our common stock and (ii) warrants to purchase an aggregate of 10,547 shares of our common stock exercisable within 60 days of May 31, 2018 held by Mr. Doyle.

(9) Consists of (i) 21,969,953 shares of common stock, (ii) 1,498,913 shares of common stock subject to warrants that are exercisable within 60 days of May 31, 2018, and (iii) 2,532,854 shares of common stock subject to options that are exercisable within 60 days of May 31, 2018.

(10) Based on the Schedule 13G filed by Avista with the SEC on February 6, 2018. Consists of (i) 13,065,855 shares of common stock held by Avista Capital Partners II, L.P., (ii) 4,290,651 shares of common stock held by Avista Capital Partners (Offshore) II, L.P., and (iii) 1,041,511 shares of common stock held by Avista Capital Partners (Offshore) II-A, L.P. In this offering Avista Capital Partners II, L.P. will sell 1,597,899 shares of common stock, Avista Capital Partners (Offshore) II, L.P. will sell 524,729 shares of common stock and Avista Capital Partners (Offshore) II-A, L.P. will sell 127,372 shares of common stock, in each case assuming no exercise of the underwriters' option to purchase additional shares, or 1,837,584, 603,438, and 146,478 shares of common stock, respectively, if the underwriters' option to purchase additional shares is exercised in full. Avista Capital Partners II GP, LLC ultimately exercises voting and investment power over the shares of held by Avista Capital Partners II, L.P., Avista Capital Partners (Offshore) II, L.P., and Avista Capital Partners (Offshore) II-A, L.P. Voting and disposition decisions at Avista Capital Partners II GP, LLC with respect to such shares are made by an investment committee, the members of which include Sriram Venkataraman, who serves as a member of our board of directors. Each of the members of the investment committee disclaims beneficial ownership of these securities. The address for each of these individuals and entities is c/o Avista Capital Holdings, L.P., 65 East 55th Street, 18th Floor, New York, NY 10022.

(11) Based on the Schedule 13G/A filed by FMR LLC on February 13, 2018. Shares held by accounts managed by direct or indirect subsidiaries of FMR LLC. Abigail P. Johnson is a Director, the Chairman and the Chief Executive Officer of FMR LLC. Members of the Johnson family, including Abigail P. Johnson, are the predominant owners, directly or through trusts, of Series B voting common shares of FMR LLC, representing 49% of the voting power of FMR LLC. The Johnson family group and all other Series B shareholders have entered into a shareholders' voting agreement under which all Series B voting common shares will be voted in accordance with the majority vote of Series B voting common shares. Accordingly, through their ownership of voting common shares and the execution of the shareholders' voting agreement, members of the Johnson family may be deemed, under the Investment Company Act of 1940, to form a controlling group with respect to FMR LLC. Neither FMR LLC nor Abigail P. Johnson has the sole power to vote or direct the voting of the shares owned directly by the various investment companies registered under the Investment Company Act, advised by Fidelity Management & Research Company, a wholly owned subsidiary of FMR LLC, which power resides with the Fidelity Funds' Board of Trustees. Fidelity Management & Research Company carries out the voting of the shares under written guidelines established by the Fidelity Funds' Board of Trustees. The address for FMR LLC 245 Summer Street, Boston, MA 02210.

(12) Based on the Schedule 13G filed by TKWD Ventures LLC on November 28, 2017. Consists of (i) 3,013,139 shares of common stock and (ii) 1,488,366 shares of common stock subject to warrants that are exercisable within 60 days of May 31, 2018 held by TKWD Ventures LLC. WFD Ventures LLC is the general partner of TKWD Ventures LLC and may be deemed to have sole voting and investment power over the shares held by TKWD Ventures LLC. William F. Doyle, a member of our board of directors, is a managing member of WFD Ventures LLC, and in his capacity as such, may be deemed to exercise sole voting and investment power over the shares held by TKWD Ventures LLC. Mr. Doyle disclaims beneficial ownership in such securities, except to the extent of his pecuniary interest therein. The address for each of these individuals and entities is c/o WFD Ventures LLC, 1500 Broadway, 17th Floor, New York, NY 10036.

(13) Based on the Schedule 13G filed by Entrepreneurs Fund with the SEC on February 9, 2018 and an Initial Statement of Beneficial Ownership of Securities on Form 3 filed on October 12, 2017. Consists of (i) 2,740,065 shares of common stock and (ii) 197,948 shares of common stock subject to warrants that are exercisable within 60 days of May 31, 2018 held by Entrepreneurs Fund LP. Entrepreneurs Fund General Partner Limited, or EF GP, is the sole general partner of Entrepreneurs Fund LP, or EF LP, and may be deemed to beneficially own the shares held by EF LP. Colin Dow and Paul Bradshaw are managing directors of EF GP, and in their capacity as such, may be deemed to share the power to direct the disposition and vote the shares held by EF LP. The address for each of these individuals and entities is 2nd Floor, Windward House, La Route de la Liberation, Se. Heller, Jersey, Channel Islands JE2 3BQ.

(14) Based on the Schedule 13G filed by Ikos Invest with the SEC on February 13, 2018. Consists of (i) 2,397,980 shares of common stock held by Ikos Subsidiary AS, (ii) 9,925 shares of common stock held by Ikos Invest AS, (iii) 57,758 shares of common stock subject to warrants held by Ikos Subsidiary AS that are exercisable within 60 days of May 31, 2018, (iv) 92,412 shares of common stock subject to options held by Ikos Invest AS that are exercisable within 60 days of May 31, 2018 and (v) 13,236 shares of common stock subject to options held by Per Gisle Djupesland that are exercisable within 60 days of May 31, 2018 (although per the Schedule 13G only 7,821 options held by Dr. Djupesland remain exercisable for an equal number of shares of common stock). Dr. Per Gisle Djupesland, the Chief Scientific Officer of our wholly-owned subsidiary OptiNose AS, and Helena Djupesland, the co-Chief Executive Officer of OptiNose AS, are directors of Ikos Invest AS and its wholly-owned subsidiary Ikos Subsidiary AS, and as such they have shared voting and investment power over the shares held by Ikos Invest AS and Ikos Subsidiary AS. The address for each of Dr. and Ms. Djupesland and these entities is Lybekkveien 5C, 0772, Oslo, Norway.

## DESCRIPTION OF CAPITAL STOCK

*The following is a summary of the rights of our common and preferred stock and some of the provisions of our fourth amended and restated certificate of incorporation and amended and restated bylaws, and of the Delaware General Corporation Law. This summary is not complete. For more detailed information, please see our fourth amended and restated certificate of incorporation and amended and restated bylaws, which are filed as exhibits to the registration statement of which this prospectus is a part, as well as the relevant provisions of the Delaware General Corporation Law.*

### General

Our fourth amended and restated certificate of incorporation authorizes us to issue up to 205,000,000 shares, 200,000,000 of which is designated as common stock with a par value of $0.001 per share and 5,000,000 of which is designated as preferred stock with a par value of $0.001 per share.

### Common Stock

#### *Outstanding Shares*

As of March 31, 2018, there were 37,909,058 shares of common stock outstanding, held by 42 stockholders of record.

#### *Voting Rights*

Each holder of our common stock is entitled to one vote for each share on all matters submitted to a vote of the stockholders, other than election of directors, which is determined by a plurality of the votes cast by the stockholders entitled to vote on the election of such director. In addition, the affirmative vote of the holders of at least 66 2/3% of the voting power of all of the then outstanding voting stock is required to take certain actions, including amending certain provisions of our fourth amended and restated certificate of incorporation, such as the provisions relating to director liability, amending our bylaws or changing the Court of Chancery of the State of Delaware and United States District Court for the District of Delaware and any appellate courts thereof from being the sole and exclusive forums for certain actions brought by our stockholders against us or our directors, officers or employees.

Under our fourth amended and restated certificate of incorporation and amended and restated bylaws, our stockholders do not have cumulative voting rights. Because of this, the holders of a majority of the shares of common stock entitled to vote in any election of directors can elect all of the directors standing for election, if they should so choose.

#### *Dividends*

Subject to the preferences that may be applicable to any outstanding preferred stock, holders of our common stock are entitled to receive ratably any dividends that may be declared by our board of directors out of funds legally available for that purpose.

#### *Liquidation*

In the event of our liquidation, dissolution or winding up, holders of our common stock are entitled to share ratably in all assets remaining after payment of liabilities and the liquidation preference of any outstanding preferred stock.

#### *No Preemptive or Similar Rights*

Our common stock is not entitled to preemptive rights and is not subject to conversion, redemption or sinking fund provisions. The rights, preferences and privileges of the holders of common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that we may designate in the future.

### Convertible Preferred Stock

Our board of directors has the authority, subject to limitations prescribed by Delaware law, to issue up to 5,000,000 shares of preferred stock in one or more series, to establish from time to time the number of shares to be included in each series and to fix the designation, powers, preferences and rights of the shares of each

series and any of its qualifications, limitations and restrictions. Our board of directors also can increase or decrease the number of shares of any series, but not below the number of shares of that series then outstanding.

Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of the common stock. The purpose of authorizing our board of directors to issue preferred stock and determine its rights and preferences is to eliminate delays associated with a stockholder vote on specific issuances. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in control of our company and may adversely affect the market price of our common stock and the voting and other rights of the holders of common stock. It is not possible to state the actual effect of the issuance of any shares of preferred stock on the rights of holders of common stock until the board of directors determines the specific rights attached to that preferred stock. We have no current plan to issue any shares of preferred stock.

## Stock Options

As of March 31, 2018, we had outstanding options to purchase 6,309,453 shares of our common stock at a weighted-average exercise price of $9.74 per share, pursuant to the 2010 Plan.

## Warrants

In June 2010, we issued common stock warrants to certain of our stockholders, including Ikos Invest AS, Entrepreneurs Fund LP and TKWD Ventures LLC, which were immediately exercisable for an aggregate of 1,890,489 shares of our common stock at an exercise price of $8.16 per share. These warrants remain outstanding as of March 31, 2018. The holders of these warrants may exercise the warrants, at their election, in cash, by cashless exercise or by a combination of these two methods. Each warrant expires on November 1, 2020 if not earlier exercised.

## Registration Rights

Pursuant to the Registration Rights Agreement, as amended, certain holders of shares of our common stock have registration rights. After registration of these shares of common stock pursuant to these rights, these shares will become freely tradable without restriction under the Securities Act. The registration rights will terminate with respect to each stockholder on the date on which such stockholder ceases to beneficially own more than one percent of our shares of common stock then outstanding or can sell all of its registrable shares without limitation during a three-month period without registration pursuant to Rule 144 of the Securities Act or another similar exemption under the Securities Act. See “Shares Eligible for Future Sale - Rule 144.” An aggregate of 17,299,055 shares of common stock are entitled to these registration rights. We have complied with our obligations under the Registration Rights Agreement in connection with this offering.

### *Demand Registration Rights*

Pursuant to the Registration Rights Agreement, as amended, certain holders of registrable shares who are party to the Registration Rights Agreement have the right to demand that we file a Form S-1 registration statement for the registration of their shares of common stock. These registration rights are subject to specified conditions and limitations, including a minimum expected aggregate gross proceeds of $20.0 million applicable to registration demands by certain stockholders, the number of registration demands and the right of a managing underwriter to limit the number of shares included in any such registration under specified circumstances. Upon such a request, we are required to effect the registration as expeditiously as possible. For each registration demand, we are not obligated to file a registration statement pursuant to this provision on more than one occasion, unless such registration statement was not declared effective by the SEC.

### *Registration on Form S-3*

In addition, subject to specified limitations set forth in the Registration Rights Agreement, as amended, at any time after we become eligible to file a registration statement on Form S-3, holders of at least 20% of the registrable securities then outstanding may request that we register their registrable securities on a registration statement on Form S-3 for purposes of a public offering if the total amount of registrable securities registered have an aggregate offering price of at least $20.0 million. We are not obligated to file a registration statement pursuant to this provision on more than two occasions in any 12-month period. In connection with the filing of a

registration statement on Form S-3, certain of our stockholders will also be able to undertake firmly underwritten resale offerings with respect to any shares that are registered on such Form S-3.

### *Piggyback Registration Rights*

If at any time we propose to file a registration statement to register any of our securities under the Securities Act, either for our own account or for the account of any of our stockholders, other than pursuant to the demand registration rights described above, the holders of our registrable securities are entitled to notice of registration and, subject to specified exceptions, we will be required upon the holders' request to use our best efforts to include their then-held registrable securities in the registration statement. These piggyback registration rights are subject to specified conditions and limitations, including the right of the underwriters to limit the number of shares included in any such registration under specified circumstances. In addition, in connection with an underwritten secondary offering requested by Avista, certain members of our management will have the right to participate on a pro rata basis.

### *Other Provisions*

We will pay all registration expenses, other than underwriting discounts and commissions and transfer taxes, if any, attributable to the sale of the registrable securities related to any registration effected pursuant to the Registration Rights Agreement, including a registration demand or an underwritten resale offering on Form S-3. Unless a registration has been revoked by the holders, we are also required to pay the fees and expenses of one counsel for the holders of registrable securities designated by the holder of a majority of registrable securities being registered, as well as the fees and expenses of counsel for Avista. The Registration Rights Agreement contains customary cross-indemnification provisions pursuant to which we are obligated to indemnify the selling stockholders in the event of material misstatements or omissions in the registration statement attributable to us, and they are obligated to indemnify us for material misstatements or omissions in the registration statement attributable to them.

## Delaware Anti-Takeover Law and Provisions of Our Certificate of Incorporation and Bylaws

### *Delaware Anti-Takeover Law*

Our fourth amended and restated certificate of incorporation provides that we will not be subject to Section 203 of the Delaware General Corporation Law, or Section 203, until such time that Avista ceases to beneficially own 15% of more of our outstanding shares of common stock. Our fourth amended and restated certificate of incorporation does, however, contain a provision that generally mirrors Section 203, except that it excludes Avista and its affiliates from the definition of "interested stockholder." At such time that Avista ceases to own 15% or more of our capital stock, we will be governed by the provisions of Section 203. Section 203 generally prohibits a public Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years after the date of the transaction in which the person became an interested stockholder, unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- the interested stockholder owned at least 85% of the voting stock of the corporation outstanding upon consummation of the transaction, excluding for purposes of determining the number of shares outstanding (1) shares owned by persons who are directors and also officers and (2) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or subsequent to the consummation of the transaction, the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least $66\frac{2}{3}$% of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines a business combination to include:

- any merger or consolidation involving the corporation and the interested stockholder;

- any sale, transfer, pledge or other disposition involving the interested stockholder of 10% or more of the assets of the corporation;
- subject to exceptions, any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder;
- subject to exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder; and
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by the entity or person.

### *Certificate of Incorporation and Bylaws*

Provisions of our fourth amended and restated certificate of incorporation and our amended and restated bylaws may delay or discourage transactions involving an actual or potential change of control or change in our management, including transactions in which stockholders might otherwise receive a premium for their shares, or transactions that our stockholders might otherwise deem to be in their best interests. Therefore, these provisions could adversely affect the price of our common stock. Among other things, our fourth amended and restated certificate of incorporation and our amended and restated bylaws:

- permit our board of directors to issue up to 5,000,000 shares of preferred stock, with any rights, preferences and privileges as it may designate, which issuance could result in the loss of voting control by other stockholders;
- provide that our board of directors is classified into three classes with staggered, three-year terms and that, subject to the rights of Avista to remove its director nominees with or without cause, directors may only be removed for cause by the affirmative vote of the holders of at least a majority of the voting power of outstanding shares of our capital stock;
- subject to any director nomination rights afforded Avista, provide that all vacancies on our board of directors, including as a result of newly created directorships, may, except as otherwise required by law, be filled only by the affirmative vote of a majority of directors then in office, even if less than a quorum;
- require that any action to be taken by our stockholders must be effected at a duly called annual or special meeting of stockholders and not be taken by written consent;
- provide that, with the exception of director nominees submitted by Avista under the Stockholders’ Agreement, stockholders seeking to present proposals before a meeting of stockholders or to nominate candidates for election as directors at a meeting of stockholders must provide advance notice in writing, and also specify requirements as to the form and content of a stockholder’s notice;
- require that the amendment of certain provisions of our certificate of incorporation relating to several anti-takeover measures and other provisions may only be approved by a vote of $66^2/_3$% of our outstanding common stock;
- require that the amendment of our bylaws be approved by the affirmative vote of a majority of directors then in office or $66^2/_3$% of our outstanding common stock entitled to vote thereon;
- do not provide for cumulative voting rights, thereby allowing the holders of a majority of the shares of common stock entitled to vote in any election of directors to elect all of the directors standing for election; and
- provide that special meetings of our stockholders may be called only by the chairman or vice chairman of our board of directors, our chief executive officer, or a majority of our board of directors.

The combination of these provisions will make it more difficult for our existing stockholders to replace our board of directors as well as for another party to obtain control of us by replacing our board of directors. Since our board of directors has the power to retain and discharge our officers, these provisions could also make it more difficult for existing stockholders or another party to effect a change in management. In addition, the authorization of undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to change our control.

These provisions are intended to enhance the likelihood of continued stability in the composition of our board of directors and its policies and to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to reduce our vulnerability to hostile takeovers and to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and may have the effect of delaying changes in our control or management. As a consequence, these provisions may also inhibit fluctuations in the market price of our stock that could result from actual or rumored takeover attempts. We believe that the benefits of these provisions, including increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure our company, outweigh the disadvantages of discouraging takeover proposals, because negotiation of takeover proposals could result in an improvement of their terms.

### *Choice of Forum*

Our fourth amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware, or the United States District Court for the District of Delaware and any appellate courts thereof where subject matter jurisdiction is vested exclusively in the federal courts of the United States of America, will be the exclusive forum for:

- any derivative action or proceeding brought on our behalf;
- any action asserting a breach of fiduciary duty;
- any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our fourth amended and restated certificate of incorporation or our amended and restated bylaws; or
- any action asserting a claim against us that is governed by the internal affairs doctrine.

The enforceability of similar choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that, in connection with any action, a court could find the choice of forum provisions contained in our fourth amended and restated certificate of incorporation to be inapplicable or unenforceable in such action.

### Nasdaq Global Select Market Listing

Our common stock is listed on the Nasdaq Global Select Market under the symbol "OPTN."

### Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Broadridge Corporate Issuer Solutions, Inc. The transfer agent's address is 1717 Arch St., Suite 1300, Philadelphia, Pennsylvania 19103.

# SHARES ELIGIBLE FOR FUTURE SALE

Future sales of substantial amounts of our common stock in the public market after this offering, or the perception that these sales could occur, could adversely affect prevailing market prices for our common stock as well as our ability to raise equity capital in the future.

Based on the number of shares of common stock outstanding as of March 31, 2018, upon the closing of this offering, 40,159,058 shares of common stock will be outstanding, assuming the issuance by us of 2,250,000 shares of common stock in this offering, but assuming no exercise of the underwriters' option to purchase additional shares. Of these shares, 21,695,705 will be freely tradable unless purchased by our "affiliates" as that term is defined in Rule 144 under the Securities Act. The remaining shares of common stock outstanding after this offering will be restricted as a result of securities laws or lock-up agreements. These remaining shares will be eligible for sale under Rule 144 of the Securities Act upon expiration of lock-up agreements 90 days after the date of this offering, subject to certain exceptions and in certain circumstances to the volume, manner of sale and other limitations under Rule 144.

## Rule 144

In general, pursuant to Rule 144 under the Securities Act, any person who is not an affiliate of ours at any time during the three months preceding a sale and has held their shares for at least six months, including the holding period of any prior owner other than one of our affiliates, may sell shares without restriction, provided current public information about us is available. In addition, under Rule 144, any person who is not an affiliate of ours at any time during the three months preceding a sale and has held their shares for at least one year, including the holding period of any prior owner other than one of our affiliates, are entitled to sell an unlimited number of shares without regard to whether current public information about us is available.

A person who is an affiliate of ours and who has beneficially owned restricted securities for at least six months, including the holding period of any prior owner other than one of our affiliates, is entitled to sell a number of restricted shares within any three-month period that does not exceed the greater of:

- 1% of the number of shares of our common stock then outstanding, which will equal approximately 401,590 shares immediately after this offering, based on the number of shares of common stock outstanding as of March 31, 2018; or

- the average weekly trading volume of our common stock on the Nasdaq Global Select Market during the four calendar weeks preceding the filing of a notice on Form 144 with respect to the sale.

Sales of restricted shares under Rule 144 held by our affiliates are also subject to requirements regarding the manner of sale, notice and the availability of current public information about us. Rule 144 also provides that affiliates relying on Rule 144 to sell shares of our common stock that are not restricted shares must nonetheless comply with the same restrictions applicable to restricted shares, other than the holding period requirement.

## Equity Incentive Plans

We have filed and may in the future file with the SEC registration statements on Form S-8 under the Securities Act covering the shares of common stock reserved for issuance under the 2010 Plan and 2017 ESPP. Shares registered under such registration statements will be available for sale in the open market, subject to vesting restrictions, Rule 144 volume limitations for affiliates and the lock-up agreements described below, if applicable.

## Lock-up Agreements

We, along with our directors, executive officers, and the selling stockholders, have agreed with the underwriters that for a period of 90 days after the date of this prospectus, or the restricted period, subject to specified exceptions, we and they will not sell, offer to sell, contract to sell or lend, effect any short sale or establish or increase any put equivalent position or liquidate or decrease any call equivalent position, pledge, hypothecate, grant any security interest in or in any other way transfer or dispose of, directly or indirectly, any shares of common stock or any securities convertible into or exercisable or exchangeable for shares of common stock, or enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic

consequences of ownership of the common stock. In addition, our directors, executive officers, and the selling stockholders have agreed, subject to specified exceptions, to waive their registration rights, if any, during the 90-day lock-up period after the date of this prospectus. Upon expiration of the restricted period, certain of our stockholders will have the right to require us to register their shares under the Securities Act. See “- Registration Rights” below and “Description of Capital Stock - Registration Rights.”

Certain of our employees, including our executive officers and/or directors, may enter into written trading plans that are intended to comply with Rule 10b5-1 under the Exchange Act. Sales under these trading plans would not be permitted until the expiration of the lock-up agreements described above.

### Registration Rights

The holders of 17,299,055 shares of common stock or their transferees are entitled to various rights with respect to registration of their shares under the Securities Act, subject to the lock-up arrangement described above. Registration of these shares under the Securities Act would result in these shares becoming fully tradable without restriction under the Securities Act, except for shares purchased by affiliates, immediately upon the effectiveness of the registration. Any sales of securities by these stockholders could have a material adverse effect on the trading price of our common stock. We have complied with our obligations under the Registration Rights Agreement in connection with this offering. See “Description of Capital Stock - Registration Rights” for additional information.

## MATERIAL UNITED STATES FEDERAL INCOME TAX CONSEQUENCES FOR NON-U.S. HOLDERS OF COMMON STOCK

The following is a general discussion of the material U.S. federal income tax consequences applicable to non-U.S. holders (as defined herein) with respect to the purchase, ownership and disposition of shares of our common stock issued or acquired pursuant to this offering. All prospective non-U.S. holders of our common stock should consult their tax advisors with respect to the U.S. federal, state, local and non-U.S. tax consequences of the purchase, ownership and disposition of our common stock. In general, a non-U.S. holder means a beneficial owner of our common stock (other than a partnership or an entity or arrangement treated as a partnership for U.S. federal income tax purposes) that is not, for U.S. federal income tax purposes:

- an individual who is a citizen or resident of the United States;
- a corporation, or an entity treated as a corporation, created or organized in the United States or under the laws of the United States or of any state thereof or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust if (1) a U.S. court can exercise primary supervision over the trust's administration and one or more U.S. persons have the authority to control all of the trust's substantial decisions or (2) the trust has a valid election in effect under applicable U.S. Treasury Regulations to be treated as a U.S. person.

This discussion is based on current provisions of the U.S. Internal Revenue Code of 1986, as amended, or the Code, existing U.S. Treasury Regulations promulgated thereunder, published administrative pronouncements and rulings of the U.S. Internal Revenue Service, or the IRS, and judicial decisions, all as in effect as of the date of this prospectus. These authorities are subject to change and to differing interpretation, possibly with retroactive effect. Any change or differing interpretation could alter the tax consequences to non-U.S. holders described in this prospectus.

We assume in this discussion that a non-U.S. holder holds shares of our common stock as a capital asset within the meaning of Section 1221 of the Code (generally, property held for investment). This discussion does not address all aspects of U.S. federal income taxation that may be relevant to a particular non-U.S. holder in light of that non-U.S. holder's individual circumstances, nor does it address any alternative minimum, Medicare contribution tax on investment income, estate or gift tax consequences, or any aspects of U.S. state, local or non-U.S. taxes. This discussion also does not consider any specific facts or circumstances that may apply to a non-U.S. holder and does not address the special tax rules applicable to particular non-U.S. holders, such as holders that own, or are deemed to own, more than 5% of our capital stock (except to the extent specifically set forth below), corporations that accumulate earnings to avoid U.S. federal income tax, tax-exempt organizations, banks, financial institutions, insurance companies, brokers, dealers or traders in securities, commodities or currencies, tax-qualified retirement plans, holders who hold or receive our common stock pursuant to the exercise of employee stock options or otherwise as compensation, holders holding our common stock as part of a hedge, straddle or other risk reduction strategy, conversion transaction or other integrated investment, persons subject to special tax accounting under Section 451(b) of the Code, holders deemed to sell our common stock under the constructive sale provisions of the Code, controlled foreign corporations, passive foreign investment companies and certain former U.S. citizens or long-term residents.

In addition, this discussion does not address the tax treatment of partnerships (or entities or arrangements that are treated as partnerships for U.S. federal income tax purposes) or persons that hold their common stock through partnerships. If a partnership, including any entity or arrangement treated as a partnership for U.S. federal income tax purposes, holds shares of our common stock, the U.S. federal income tax treatment of a partner in such partnership will generally depend upon the status of the partner and the activities of the partnership. Such partners and partnerships should consult their tax advisors regarding the tax consequences of the purchase, ownership and disposition of our common stock.

There can be no assurance that a court or the IRS will not challenge one or more of the tax consequences described herein, and we have not obtained, nor do we intend to obtain, a ruling or opinion of counsel with

respect to the U.S. federal income tax consequences to a non-U.S. holder of the purchase, ownership or disposition of our common stock.

### Distributions on Our Common Stock

Distributions, if any, on our common stock generally will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. If a distribution exceeds our current and accumulated earnings and profits, the excess will be treated as a tax-free return of the non-U.S. holder’s investment, up to such holder’s adjusted tax basis in the common stock. Any remaining excess will be treated as capital gain from the sale or exchange of such common stock, subject to the tax treatment described below in “Gain on Sale, Exchange or Other Disposition of Our Common Stock.” Any such distribution will also be subject to the discussion below under the heading “Foreign Accounts.”

Except as otherwise described below, dividends paid to a non-U.S. holder will generally be subject to withholding of U.S. federal income tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. A non-U.S. holder who claims the benefit of an applicable income tax treaty generally will be required to satisfy certain certification and other requirements. Such non-U.S. holders must generally provide us and/or our paying agent, as applicable, with a properly executed IRS Form W-8BEN or IRS Form W-8BEN-E (or other appropriate form) claiming an exemption from or reduction in withholding under an applicable income tax treaty. Such certificate must be provided before the payment of dividends and must be updated periodically. If tax is withheld in an amount in excess of the amount applicable under an income tax treaty, a refund of the excess amount may generally be obtained by a non-U.S. holder by timely filing an appropriate claim for refund with the IRS. Non-U.S. holders should consult their tax advisors regarding their entitlement to benefits under an applicable income tax treaty.

Dividends that are treated as effectively connected with a trade or business conducted by a non-U.S. holder within the United States and, if an applicable income tax treaty so provides, that are attributable to a permanent establishment or a fixed base maintained by the non-U.S. holder within the United States, are generally exempt from the 30% withholding tax if the non-U.S. holder satisfies applicable certification and disclosure requirements. Prior to the distribution date (generally including provision of a valid IRS Form W-8ECI (or applicable successor form) certifying that the dividends are effectively connected with the non-U.S. holder's conduct of a trade or business within the United States). However, such U.S. effectively connected income, net of specified deductions and credits, is taxed at the same graduated U.S. federal income tax rates applicable to U.S. persons (as defined in the Code). Any U.S. effectively connected income received by a non-U.S. holder that is a corporation may also, under certain circumstances, be subject to an additional “branch profits tax” at a 30% rate or such lower rate as may be specified by an applicable income tax treaty.

### Gain on Sale, Exchange or Other Disposition of Our Common Stock

Subject to the discussion below regarding backup withholding and foreign accounts, in general, a non-U.S. holder will not be subject to any U.S. federal income tax on any gain realized upon such holder’s sale, exchange or other disposition of shares of our common stock unless:

- the gain is effectively connected with a U.S. trade or business of the non-U.S. holder and, if an applicable income tax treaty so provides, is attributable to a permanent establishment or a fixed base maintained in the United States by such non-U.S. holder, in which case the non-U.S. holder generally will be taxed at the graduated U.S. federal income tax rates applicable to U.S. persons (as defined in the Code) and, if the non-U.S. holder is a foreign corporation, the branch profits tax described above in “Distributions on Our Common Stock” also may apply;

- the non-U.S. holder is a nonresident alien individual who is present in the United States for 183 days or more in the taxable year of the disposition and certain other conditions are met, in which case the non-U.S. holder will be subject to a 30% tax (or such lower rate as may be specified by an applicable income tax treaty) on the net gain derived from the disposition, which may be offset by U.S. source capital losses of the non-U.S. holder, if any (even though the individual is not considered a resident of the United States); or

- our common stock constitutes a U.S. real property interest because we are, or have been, at any time during the five-year period preceding such disposition (or the non-U.S. holder's holding period, if shorter) a "U.S. real property holding corporation." Generally, a corporation is a U.S. real property holding corporation only if the fair market value of its U.S. real property interests equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests plus its other assets used or held for use in a trade or business. Although there can be no assurance, we do not believe that we are, or have been, a U.S. real property holding corporation, or that we are likely to become one in the future. Even if we are or become a U.S. real property holding corporation, provided that our common stock is regularly traded, as defined by applicable U.S. Treasury Regulations, on an established securities market, our common stock will be treated as a U.S. real property interest only with respect to a non-U.S. holder that holds more than 5% of our outstanding common stock, directly or indirectly, actually or constructively, during the shorter of the 5-year period ending on the date of the disposition or the period that the non-U.S. holder held our common stock. If we are a U.S. real property holding corporation and either our common stock is not regularly traded on an established securities market or a non-U.S. holder holds, or is treated as holding, more than 5% of our outstanding common stock, directly or indirectly, during the applicable testing period, such non-U.S. holder will generally be taxed on any gain in the same manner as gain that is effectively connected with the conduct of a U.S. trade or business, except that the branch profits tax generally will not apply. If we are a U.S. real property holding corporation and our common stock is not regularly traded on an established securities market, a non-U.S. holder's proceeds received on the disposition of our common stock will also generally be subject to withholding at a rate of 15%. Prospective investors are encouraged to consult their own tax advisors regarding the possible consequences to them if we are, or were to become, a U.S. real property holding corporation. No assurance can be provided that our common stock is or will in the future be regularly traded on an established securities market for purposes of the rules described above.

### Backup Withholding and Information Reporting

We must report annually to the IRS and to each non-U.S. holder the gross amount of the dividends on our common stock paid to such holder and the tax withheld, if any, with respect to such dividends. A non-U.S. holder will have to comply with specific certification procedures to establish that the holder is not a U.S. person (as defined in the Code) in order to avoid backup withholding at the applicable rate with respect to dividends on our common stock. A non-U.S. holder generally will not be subject to U.S. backup withholding with respect to payments of dividends on our common stock if it certifies its non-U.S. status by providing a valid IRS Form W-8BEN or W-8BEN-E (or successor form) or W-8ECI, or otherwise establishes an exemption; provided we do not have actual knowledge or reason to know such non-U.S. holder is a U.S. person, as defined in the Code. Dividends paid to non-U.S. holders subject to the U.S. withholding tax, as described above in "Distributions on Our Common Stock," generally will be exempt from U.S. backup withholding.

Information reporting and backup withholding will generally apply to the proceeds of a disposition of our common stock by a non-U.S. holder effected by or through the U.S. office of any broker, U.S. or foreign, unless the holder certifies its status as a non-U.S. holder and satisfies certain other requirements, or otherwise establishes an exemption. Generally, information reporting and backup withholding will not apply to a payment of disposition proceeds to a non-U.S. holder where the transaction is effected outside the United States through a non-U.S. office of a broker. However, for information reporting purposes, dispositions effected through a non-U.S. office of a broker with substantial U.S. ownership or operations generally will be treated in a manner similar to dispositions effected through a U.S. office of a broker. Non-U.S. holders should consult their tax advisors regarding the application of the information reporting and backup withholding rules to them.

Copies of information returns may be made available to the tax authorities of the country in which the non-U.S. holder resides or is incorporated under the provisions of a specific treaty or agreement.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules from a payment to a non-U.S. holder may be allowed as a credit against the non-U.S. holder's U.S. federal income tax liability, if any, and may entitle such holder to a refund, provided that the required information is timely furnished to the IRS.

**Foreign Accounts**

The Foreign Account Tax Compliance Act, or FATCA, generally imposes a U.S. federal withholding tax of 30% on dividends and the gross proceeds of a disposition of our common stock paid to a "foreign financial institution" (as specifically defined for this purpose), unless such institution enters into an agreement with the U.S. government to, among other things, withhold on certain payments and to collect and provide to the U.S. tax authorities substantial information regarding U.S. account holders of such institution (which includes certain equity and debt holders of such institution, as well as certain account holders that are foreign entities with U.S. owners) or otherwise qualifies for an exemption from these rules. A U.S. federal withholding tax of 30% also applies to dividends and will apply to the gross proceeds of a disposition of our common stock paid to a non-financial foreign entity (as defined in the Code), unless such entity provides the withholding agent with either a certification that it does not have any substantial direct or indirect U.S. owners or provides information regarding substantial direct and indirect U.S. owners of the entity, or otherwise qualifies for an exemption from these rules. The withholding provisions described above currently apply to dividends paid on our common stock and will generally apply with respect to gross proceeds of a sale or other disposition of our common stock on or after January 1, 2019.

If withholding is imposed under FATCA on a payment related to our common stock, a beneficial owner that is not a foreign financial institution and that otherwise would not be subject to withholding (or that otherwise would be entitled to a reduced rate of withholding) generally may obtain a refund from the IRS by filing a U.S. federal income tax return (which may entail significant administrative burden). An intergovernmental agreement between the United States and an applicable foreign country may modify the requirements described in this paragraph.

THIS SUMMARY IS NOT INTENDED TO BE TAX ADVICE. EACH PROSPECTIVE INVESTOR SHOULD CONSULT ITS TAX ADVISOR REGARDING THE PARTICULAR U.S. FEDERAL, STATE AND LOCAL AND NON-U.S. TAX CONSEQUENCES OF PURCHASING, OWNING AND DISPOSING OF OUR COMMON STOCK, INCLUDING THE CONSEQUENCES OF ANY PROPOSED CHANGE IN APPLICABLE LAWS.

# UNDERWRITING

Subject to the terms and conditions set forth in the underwriting agreement, dated , 2018, among us, the selling stockholders, Jefferies LLC and Piper Jaffray & Co., as the representatives of the underwriters named below and the joint book-running managers of this offering, we and the selling stockholders have agreed to sell to the underwriters, and each of the underwriters has agreed, severally and not jointly, to purchase from us and the selling stockholders, the respective number of shares of common stock shown opposite its name below:

| UNDERWRITER | NUMBER OF SHARES |
|---|---|
| Jefferies LLC | |
| Piper Jaffray & Co. | |
| BMO Capital Markets Corp. | |
| RBC Capital Markets, LLC | |
| Cantor Fitzgerald & Co. | |
| Total | 4,500,000 |

The underwriting agreement provides that the obligations of the several underwriters are subject to certain conditions precedent such as the receipt by the underwriters of officers' certificates and legal opinions and approval of certain legal matters by their counsel. The underwriting agreement provides that the underwriters will purchase all of the shares of common stock if any of them are purchased. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the non-defaulting underwriters may be increased or the underwriting agreement may be terminated. We and the selling stockholders have agreed to indemnify the underwriters and certain of their controlling persons against certain liabilities, including liabilities under the Securities Act, and to contribute to payments that the underwriters may be required to make in respect of those liabilities.

The underwriters have advised us and the selling stockholders that, following the closing of this offering, they currently intend to make a market in the common stock as permitted by applicable laws and regulations. However, the underwriters are not obligated to do so, and the underwriters may discontinue any market-making activities at any time without notice in their sole discretion. Accordingly, no assurance can be given as to the liquidity of the trading market for the common stock, that you will be able to sell any of the common stock held by you at a particular time or that the prices that you receive when you sell will be favorable.

The underwriters are offering the shares of common stock subject to their acceptance of the shares of common stock from us and the selling stockholders and subject to prior sale. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

## Commission and Expenses

The underwriters have advised us and the selling stockholders that they propose to offer the shares of common stock to the public at the public offering price set forth on the cover page of this prospectus and to certain dealers, which may include the underwriters, at that price less a concession not in excess of $ per share of common stock. The underwriters may allow, and certain dealers may reallow, a discount from the concession not in excess of $ per share of common stock to certain brokers and dealers. After the offering, the public offering price, concession and reallowance to dealers may be reduced by the representatives. No such reduction will change the amount of proceeds to be received by us or the selling stockholders as set forth on the cover page of this prospectus.

The following table shows the public offering price, the underwriting discounts and commissions that we and the selling stockholders are to pay the underwriters and the proceeds, before expenses, to us and the selling stockholders in connection with this offering. Such amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

| | PER SHARE | | TOTAL | |
|---|---|---|---|---|
| | WITHOUT OPTION TO PURCHASE ADDITIONAL SHARES | WITH OPTION TO PURCHASE ADDITIONAL SHARES | WITHOUT OPTION TO PURCHASE ADDITIONAL SHARES | WITH OPTION TO PURCHASE ADDITIONAL SHARES |
| Public offering price | $ | $ | $ | $ |
| Underwriting discounts and commissions paid by us | $ | $ | $ | $ |
| Underwriting discounts and commissions paid by the selling stockholders | $ | $ | $ | $ |
| Proceeds to us, before expenses | $ | $ | $ | $ |
| Proceeds to selling stockholders, before expenses | $ | $ | $ | $ |

We estimate expenses payable by us in connection with this offering, other than the underwriting discounts and commissions referred to above, will be approximately $0.4 million. We have also agreed to reimburse the underwriters for certain expenses, including an amount not to exceed $15,000 in connection with the clearance of this offering with the Financial Industry Regulatory Authority, or FINRA, as set forth in the underwriting agreement. In accordance with FINRA Rule 5110, the reimbursement of these fees is deemed underwriting compensation for this offering.

### Listing

Our common stock is listed on the Nasdaq Global Select Market under the trading symbol "OPTN."

### Stamp Taxes

If you purchase shares of common stock offered in this prospectus, you may be required to pay stamp taxes and other charges under the laws and practices of the country of purchase, in addition to the offering price listed on the cover page of this prospectus.

### Option to Purchase Additional Shares

We and the selling stockholders have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase, from time to time, in whole or in part, up to an aggregate of 675,000 shares from us and the selling stockholders at the public offering price set forth on the cover page of this prospectus, less underwriting discounts and commissions. If the underwriters exercise this option, each underwriter will be obligated, subject to specified conditions, to purchase a number of additional shares proportionate to that underwriter's initial purchase commitment as indicated in the table above. This option may be exercised only if the underwriters sell more shares than the total number set forth on the cover page of this prospectus.

### No Sales of Similar Securities

We, our officers, directors, and the selling stockholders have agreed, subject to specified exceptions, not to directly or indirectly:

- sell, offer, contract or grant any option to sell (including any short sale), pledge, transfer, establish an open "put equivalent position" within the meaning of Rule 16a-l(h) under the Exchange Act,

- otherwise dispose of any shares of common stock, options or warrants to acquire shares of common stock, or securities exchangeable or exercisable for or convertible into shares of common stock currently or hereafter owned either of record or beneficially,
- enter into any swap, hedge or similar arrangement or agreement that transfers, in whole or in part, the economic risk of ownership of shares of our common stock, or of options or warrants to shares of our common stock, or securities or rights exchangeable or exercisable for or convertible into shares of our common stock,
- make any demand for, or exercise any right with respect to, the registration under the Securities Act of the offer and sale of any shares of our common stock, or of options or warrants to shares of our common stock, or securities or rights exchangeable or exercisable for or convertible into shares of our common stock, or cause to be filed a registration statement, prospectus or prospectus supplement (or an amendment or supplement thereto) with respect to any such registration, or
- publicly announce an intention to do any of the foregoing for a period of 90 days after the date of this prospectus without the prior written consent of Jefferies LLC and Piper Jaffray & Co.

This restriction terminates after the close of trading of the common stock on and including the 90th day after the date of this prospectus.

Jefferies LLC and Piper Jaffray & Co. may, in their discretion and at any time or from time to time before the termination of the 90-day period, release all or any portion of the securities subject to lock-up agreements. There are no existing agreements between the underwriters and any of our stockholders who will execute a lock-up agreement, providing consent to the sale of shares prior to the expiration of the lock-up period.

The foregoing restrictions shall not apply to issuances of common stock or grants of stock options, restricted stock or other incentive compensation pursuant to the terms of certain stock plans or arrangements described herein.

### Stabilization

The underwriters have advised us that, pursuant to Regulation M under the Exchange Act, certain persons participating in the offering may engage in short sale transactions, stabilizing transactions, syndicate covering transactions or the imposition of penalty bids in connection with this offering. These activities may have the effect of stabilizing or maintaining the market price of the common stock at a level above that which might otherwise prevail in the open market. Establishing short sales positions may involve either “covered” short sales or “naked” short sales.

“Covered” short sales are sales made in an amount not greater than the underwriters’ option to purchase additional shares of our common stock in this offering. The underwriters may close out any covered short position by either exercising their option to purchase additional shares or purchasing shares of our common stock in the open market. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the option to purchase additional shares.

“Naked” short sales are sales in excess of the option to purchase additional shares. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the shares of our common stock in the open market after pricing that could adversely affect investors who purchase in this offering.

A stabilizing bid is a bid for the purchase of shares of common stock on behalf of the underwriters for the purpose of fixing or maintaining the price of the common stock. A syndicate covering transaction is the bid for or the purchase of shares of common stock on behalf of the underwriters to reduce a short position incurred by the underwriters in connection with the offering. Similar to other purchase transactions, the underwriter’s purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of our common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market. A penalty bid is an

arrangement permitting the underwriters to reclaim the selling concession otherwise accruing to a syndicate member in connection with the offering if the common stock originally sold by such syndicate member are purchased in a syndicate covering transaction and therefore have not been effectively placed by such syndicate member.

Neither we nor any of the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our common stock. The underwriters are not obligated to engage in these activities and, if commenced, any of the activities may be discontinued at any time.

### Electronic Distribution

A prospectus in electronic format may be made available by e-mail or on the web sites or through online services maintained by one or more of the underwriters or their affiliates. In those cases, prospective investors may view offering terms online and may be allowed to place orders online. The underwriters may agree with us to allocate a specific number of shares of common stock for sale to online brokerage account holders. Any such allocation for online distributions will be made by the underwriters on the same basis as other allocations. Other than the prospectus in electronic format, the information on the underwriters' web sites and any information contained in any other web site maintained by any of the underwriters is not part of this prospectus, has not been approved and/or endorsed by us or the underwriters and should not be relied upon by investors.

### Other Activities and Relationships

The underwriters and certain of their affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. The underwriters and certain of their affiliates have, from time to time, performed, and may in the future perform, various commercial and investment banking and financial advisory services for us and our affiliates, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the underwriters and certain of their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers, and such investment and securities activities may involve securities and/or instruments issued by us and our affiliates. If the underwriters or their respective affiliates have a lending relationship with us, they routinely hedge their credit exposure to us consistent with their customary risk management policies. The underwriters and their respective affiliates may hedge such exposure by entering into transactions which consist of either the purchase of credit default swaps or the creation of short positions in our securities or the securities of our affiliates, including potentially the common stock offered hereby. Any such short positions could adversely affect future trading prices of the common stock offered hereby. The underwriters and certain of their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

### Selling Restrictions

#### *Australia*

This prospectus is not a disclosure document for the purposes of Australia's Corporations Act 2001 (Cth) of Australia, or Corporations Act, has not been lodged with the Australian Securities & Investments Commission and is only directed to the categories of exempt persons set out below. Accordingly, if you receive this prospectus in Australia:

You confirm and warrant that you are either:

- a "sophisticated investor" under section 708(8)(a) or (b) of the Corporations Act;
- a "sophisticated investor" under section 708(8)(c) or (d) of the Corporations Act and that you have provided an accountant's certificate to the company which complies with the requirements of

section 708(8)(c)(i) or (ii) of the Corporations Act and related regulations before the offer has been made; or

- a "professional investor" within the meaning of section 708(11)(a) or (b) of the Corporations Act.

To the extent that you are unable to confirm or warrant that you are an exempt sophisticated investor or professional investor under the Corporations Act any offer made to you under this prospectus is void and incapable of acceptance.

You warrant and agree that you will not offer any of the shares issued to you pursuant to this prospectus for resale in Australia within 12 months of those shares being issued unless any such resale offer is exempt from the requirement to issue a disclosure document under section 708 of the Corporations Act.

### *Canada*

*Resale Restrictions*

The distribution of shares in Canada is being made only in the provinces of Ontario, Québec, Manitoba, Alberta and British Columbia on a private placement basis exempt from the requirement that we prepare and file a prospectus with the securities regulatory authorities in each province where trades of these securities are made. Any resale of the shares in Canada must be made under applicable securities laws which may vary depending on the relevant jurisdiction, and which may require resales to be made under available statutory exemptions or under a discretionary exemption granted by the applicable Canadian securities regulatory authority. Purchasers are advised to seek legal advice prior to any resale of the securities.

*Representations of Canadian Purchasers*

By purchasing shares in Canada and accepting delivery of a purchase confirmation, a purchaser is representing to us and the dealer from whom the purchase confirmation is received that:

- the purchaser is entitled under applicable provincial securities laws to purchase the shares without the benefit of a prospectus qualified under those securities laws as it is an "accredited investor" as defined under National Instrument 45-106-Prospectus Exemptions,

- the purchaser is a "permitted client" as defined in National Instrument 31-103-Registration Requirements, Exemptions and Ongoing Registrant Obligations,

- where required by law, the purchaser is purchasing as principal and not as agent, and

- the purchaser has reviewed the text above under Resale Restrictions.

*Conflicts of Interest*

Canadian purchasers are hereby notified that certain of the underwriters are relying on the exemption set out in section 3A.3 or 3A.4, if applicable, of National Instrument 33-105-Underwriting Conflicts from having to provide certain conflict of interest disclosure in this document.

*Statutory Rights of Action*

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if the offering memorandum (including any amendment thereto) such as this document contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser of these securities in Canada should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

*Enforcement of Legal Rights*

All of our directors and officers as well as the experts named herein may be located outside of Canada and, as a result, it may not be possible for Canadian purchasers to effect service of process within Canada upon us or those persons. All or a substantial portion of our assets and the assets of those persons may be located outside of Canada and, as a result, it may not be possible to satisfy a judgment against us or those persons in Canada or to enforce a judgment obtained in Canadian courts against us or those persons outside of Canada.

*Taxation and Eligibility for Investment*

Canadian purchasers of shares should consult their own legal and tax advisors with respect to the tax consequences of an investment in the shares in their particular circumstances and about the eligibility of the shares for investment by the purchaser under relevant Canadian legislation.

***European Economic Area***

In relation to each member state of the European Economic Area which has implemented the Prospectus Directive, each referred to herein as a Relevant Member State, with effect from and including the date on which the Prospectus Directive is implemented in that Relevant Member State, referred to herein as the Relevant Implementation Date, no offer of any securities which are the subject of the offering contemplated by this prospectus has been or will be made to the public in that Relevant Member State other than any offer where a prospectus has been or will be published in relation to such securities that has been approved by the competent authority in that Relevant Member State or, where appropriate, approved in another Relevant Member State and notified to the relevant competent authority in that Relevant Member State in accordance with the Prospectus Directive, except that with effect from and including the Relevant Implementation Date, an offer of such securities may be made to the public in that Relevant Member State:

- to any legal entity which is a “qualified investor” as defined in the Prospectus Directive;
- to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the representatives of the underwriters for any such offer; or
- in any other circumstances falling within Article 3(2) of the Prospectus Directive,

provided that no such offer of securities shall require us or any of the underwriters to publish a prospectus pursuant to Article 3 of the Prospectus Directive or supplement a prospectus pursuant to Article 16 of the Prospectus Directive.

For the purposes of this provision, the expression an “offer to the public” in relation to any securities in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the securities to be offered so as to enable an investor to decide to purchase or subscribe the securities, as the same may be varied in that Relevant Member State by any measure implementing the Prospectus Directive in that Relevant Member State and the expression “Prospectus Directive” means Directive 2003/71/EC (and amendments thereto, including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member State), and includes any relevant implementing measure in the Relevant Member State and the expression “2010 PD Amending Directive” means Directive 2010/73/EU.

***Hong Kong***

No securities have been offered or sold, and no securities may be offered or sold, in Hong Kong, by means of any document, other than to persons whose ordinary business is to buy or sell shares or debentures, whether as principal or agent; or to “professional investors” as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance; or in other circumstances which do not result in the document being a “prospectus” as defined in the Companies Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of the Companies Ordinance (Cap.32) of Hong Kong. No document, invitation or advertisement relating to the securities has been issued or may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted under the securities laws of Hong Kong) other than with respect to securities which are or are intended to be disposed of only to persons outside Hong Kong or only to “professional investors” as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance.

This prospectus has not been registered with the Registrar of Companies in Hong Kong. Accordingly, this prospectus may not be issued, circulated or distributed in Hong Kong, and the securities may not be offered for subscription to members of the public in Hong Kong. Each person acquiring the securities will be required, and is deemed by the acquisition of the securities, to confirm that he is aware of the restriction on offers of the

securities described in this prospectus and the relevant offering documents and that he is not acquiring, and has not been offered any securities in circumstances that contravene any such restrictions.

### *Israel*

This document does not constitute a prospectus under the Israeli Securities Law, 5728-1968, and has not been filed with or approved by the Israel Securities Authority. In Israel, this prospectus is being distributed only to, and any offer of the shares of our common stock is directed only at investors listed in the first addendum, or the Addendum, to the Israeli Securities Law, consisting primarily of joint investment in trust funds, provident funds, insurance companies, banks, portfolio managers, investment advisors, members of the Tel Aviv Stock Exchange, underwriters, venture capital funds, entities with equity in excess of NIS 50 million and "qualified individuals," each as defined in the Addendum (as it may be amended from time to time), collectively referred to as qualified investors (in each case, purchasing for their own account or, where permitted under the Addendum, for the accounts of their clients who are investors listed in the Addendum). Qualified investors are required to submit written confirmation that they fall within the scope of the Addendum.

### *Japan*

The offering has not been and will not be registered under the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948 of Japan, as amended), or FIEL, and the Initial Purchaser will not offer or sell any securities, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means, unless otherwise provided herein, any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to others for re-offering or resale, directly or indirectly, in Japan or to a resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the FIEL and any other applicable laws, regulations and ministerial guidelines of Japan

### *Singapore*

This prospectus has not been and will not be lodged or registered with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or the invitation for subscription or purchase of the securities may not be issued, circulated or distributed, nor may the securities be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to the public or any member of the public in Singapore other than (1) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore, or the SFA, (2) to a relevant person as defined under Section 275(2), or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions, specified in Section 275 of the SFA, or (3) otherwise pursuant to, and in accordance with the conditions of any other applicable provision of the SFA.

Where the securities are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

- a corporation (which is not an accredited investor as defined under Section 4A of the SFA) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or
- a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary is an accredited investor,

shares, debentures and units of shares and debentures of that corporation or the beneficiaries' rights and interest in that trust shall not be transferable for six months after that corporation or that trust has acquired the Offer Shares under Section 275 of the SFA except:

- to an institutional investor under Section 274 of the SFA or to a relevant person defined in Section 275(2) of the SFA, or to any person pursuant to an offer that is made on terms that such shares, debentures and units of shares and debentures of that corporation or such rights and interest in that trust are acquired at a consideration of not less than $200,000 (or its equivalent in a foreign currency) for each transaction, whether such amount is to be paid for in cash or by exchange of securities or other assets, and further for corporations, in accordance with the conditions, specified in Section 275 of the SFA;
- where no consideration is given for the transfer; or

- where the transfer is by operation of law.

### *Switzerland*

The securities may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange, or SIX, or on any other stock exchange or regulated trading facility in Switzerland. This prospectus has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this prospectus nor any other offering or marketing material relating to the securities or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this prospectus nor any other offering or marketing material relating to us, the offering, or the securities have been or will be filed with or approved by any Swiss regulatory authority. In particular, this prospectus will not be filed with, and the offer of securities will not be supervised by, the Swiss Financial Market Supervisory Authority, or FINMA, and the offer of securities has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes, or CISA. The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of securities.

### *United Kingdom*

This prospectus is only being distributed to, and is only directed at, persons in the United Kingdom that are qualified investors within the meaning of Article 2(1)(e) of the Prospectus Directive that are also (1) investment professionals falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended, referred to herein as the Order, and/or (2) high net worth entities falling within Article 49(2)(a) to (d) of the Order and other persons to whom it may lawfully be communicated. Each such person is referred to herein as a Relevant Person.

This prospectus and its contents are confidential and should not be distributed, published or reproduced (in whole or in part) or disclosed by recipients to any other persons in the United Kingdom. Any person in the United Kingdom that is not a Relevant Person should not act or rely on this document or any of its contents.

## LEGAL MATTERS

The validity of the shares of common stock being offered by this prospectus will be passed upon for us by Hogan Lovells US LLP, Philadelphia, Pennsylvania. Certain legal matters relating to this offering will be passed upon for the underwriters by Cooley LLP, New York, New York.

## EXPERTS

The consolidated financial statements of OptiNose, Inc. appearing in OptiNose, Inc.'s Annual Report (Form 10-K) for the year ended December 31, 2017 have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon, included therein, and incorporated herein by reference. Such consolidated financial statements are incorporated herein by reference in reliance upon such reports given on the authority of such firm as experts in accounting and auditing.

## WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1, including exhibits and schedules, under the Securities Act, with respect to the shares of our common stock being offered by this prospectus. This prospectus, which constitutes part of the registration statement, does not contain all of the information in the registration statement and its exhibits. For further information with respect to us and the common stock offered by this prospectus, we refer you to the registration statement and its exhibits. Statements contained in this prospectus as to the contents of any contract or any other document referred to are not necessarily complete, and in each instance, we refer you to the copy of the contract or other document filed as an exhibit to the registration statement. Each of these statements is qualified in all respects by this reference.

You can read our SEC filings, including the registration statement, over the Internet at the SEC's website at www.sec.gov. You may also read and copy any document we file with the SEC at its public reference facilities at 100 F Street, NE, Washington, D.C. 20549. You may also obtain copies of these documents at prescribed rates by writing to the Public Reference Section of the SEC at 100 F Street, NE, Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference facilities. You may also request a copy of these filings, at no cost, by writing us at OptiNose, Inc., 1020 Stony Hill Road, Suite 300, Yardley, PA 19067, or by calling (267) 364-3500.

We are subject to the information reporting requirements of the Exchange Act and we file reports, proxy statements and other information with the SEC. These reports, proxy statements and other information will be available for inspection and copying at the public reference room and web site of the SEC referred to above. We also maintain a website at www.optinose.com, at which you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. Information contained on or accessible through our website is not a part of this prospectus, and the inclusion of our website address in this prospectus is an inactive textual reference only.

## INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" information from other documents that we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus. Information in this prospectus supersedes information incorporated by reference that we filed with the SEC prior to the date of this prospectus. We incorporate by reference into this prospectus and the registration statement of which this prospectus is a part the information or documents listed below that we have filed with the SEC (File No. 001-38241):

- our Annual Report on Form 10-K for the year ended December 31, 2017, filed with the SEC on March 13, 2018;
- our Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2018, filed with the SEC on May 14, 2018;

- our Current Reports on Form 8-K filed with the SEC on January 2, 2018, January 22, 2018, February 22, 2018 and June 4, 2018; and
- our Definitive Proxy Statement on Schedule 14A, filed with the SEC on April 25, 2018 (other than the portions thereof that are furnished and not filed).

Notwithstanding the statements in the preceding paragraphs, no document, report or exhibit (or portion of any of the foregoing) or any other information that we have "furnished" to the SEC pursuant to the Exchange Act shall be incorporated by reference into this prospectus.

We will furnish without charge to you, on written or oral request, a copy of any or all of the documents incorporated by reference in this prospectus, including exhibits to these documents. You should direct any requests for documents to OptiNose, Inc., Attn: Investor Relations, 1020 Stony Hill Road, Suite 300, Yardley, PA 19067.

You also may access these filings on our website at *www.optinose.com*. We do not incorporate the information on our website into this prospectus or any supplement to this prospectus and you should not consider any information on, or that can be accessed through, our website as part of this prospectus or any supplement to this prospectus (other than those filings with the SEC that we specifically incorporate by reference into this prospectus or any supplement to this prospectus).

Any statement contained in a document incorporated or deemed to be incorporated by reference in this prospectus will be deemed modified, superseded or replaced for purposes of this prospectus to the extent that a statement contained in this prospectus modifies, supersedes or replaces such statement.

**4,500,000 Shares**

**Common Stock**

---

**Preliminary Prospectus**

---

**Jefferies** **Piper Jaffray** **BMO Capital Markets** **RBC Capital Markets**

**Cantor**

, 2018

## PART II
## INFORMATION NOT REQUIRED IN PROSPECTUS

### Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth all costs and expenses, other than the underwriting discounts and commissions, payable by us in connection with the sale of the common stock being registered. All amounts shown are estimates except for the Securities and Exchange Commission, or SEC, registration fee, and the Financial Industry Regulatory Authority, Inc., or FINRA, filing fee.

| Item | Amount Paid or to be Paid |
| --- | --- |
| SEC registration fee | $ 14,652 |
| FINRA filing fee | 18,152 |
| Printing and engraving expenses | 15,000 |
| Legal fees and expenses | 250,000 |
| Accounting fees and expenses | 100,000 |
| Transfer agent and registrar fees and expenses | 6,750 |
| Miscellaneous expenses | 10,446 |
| **Total** | $ 415,000 |

### Item 14. Indemnification of Directors and Officers.

We are incorporated under the laws of the State of Delaware. Section 145 of the Delaware General Corporation Law provides that a Delaware corporation may indemnify any persons who are, or are threatened to be made, parties to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of such corporation), by reason of the fact that such person is or was an officer, director, employee or agent of such corporation, or is or was serving at the request of such person as an officer, director, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding, provided that such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the corporation's best interests and, with respect to any criminal action or proceeding, had no reasonable cause to believe that his or her conduct was illegal. A Delaware corporation may indemnify any persons who are, or are threatened to be made, a party to any threatened, pending or completed action or suit by or in the right of the corporation by reason of the fact that such person is or was a director, officer, employee or agent of such corporation, or is or was serving at the request of such corporation as a director, officer, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit provided that such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the corporation's best interests except that no indemnification is permitted without judicial approval if the officer or director is adjudged to be liable to the corporation. Where an officer or director is successful on the merits or otherwise in the defense of any action referred to above, the corporation must indemnify him or her against the expenses which such officer or director has actually and reasonably incurred. Our fourth amended and restated certificate of incorporation and amended and restated bylaws provide for the indemnification of our directors and officers to the fullest extent permitted under the Delaware General Corporation Law.

Section 102(b)(7) of the Delaware General Corporation Law permits a corporation to provide in its certificate of incorporation that a director of the corporation shall not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duties as a director, except for liability for any:

- transaction from which the director derives an improper personal benefit;
- act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payment of dividends or redemption of shares; or
- breach of a director's duty of loyalty to the corporation or its stockholders.

Our fourth amended and restated certificate of incorporation includes such a provision. Expenses incurred by any officer or director in defending any such action, suit or proceeding in advance of its final disposition shall be paid by us upon delivery to us of an undertaking, by or on behalf of such director or officer, to repay all amounts so advanced if it shall ultimately be determined that such director or officer is not entitled to be indemnified by us.

As permitted by the Delaware General Corporation Law, we have entered into indemnification agreements with our directors and executive officers. These agreements, among other things, require us to indemnify each director and officer to the fullest extent permitted by law and advance expenses to each indemnitee in connection with any proceeding in which indemnification is available.

At present, there is no pending litigation or proceeding involving any of our directors or executive officers as to which indemnification is required or permitted, and we are not aware of any threatened litigation or proceeding that may result in a claim for indemnification.

We have an insurance policy covering our officers and directors with respect to certain liabilities, including liabilities arising under the Securities Act of 1933, as amended, or the Securities Act, or otherwise.

The form of underwriting agreement filed as Exhibit 1.1 to this registration statement provides for indemnification by the underwriters named in this registration statement of our executive officers, directors and us, and by us of the underwriters named in this registration statement, for certain liabilities, including liabilities arising under the Securities Act, in connection with matters specifically provided in writing for inclusion in this registration statement. Our registration rights agreement with certain investors also provides for cross-indemnification in connection with the registration of our common stock on behalf of such investors.

### Item 15. Recent Sales of Unregistered Securities.

Set forth below is information regarding securities issued by us from January 1, 2015 through the date of this prospectus that were not registered under the Securities Act. Also included is the consideration, if any, received by us for such securities, and information relating to the section of the Securities Act, or rule of the SEC, under which exemption from registration was claimed.

(a) Issuances of Capital Stock

1. In July 2015, we issued and sold to our existing Series C-1 Preferred Stock holders an additional 236,629 shares of Series C-1 Preferred Stock at a purchase price of $21.13 per share, for aggregate consideration of $5.0 million.
2. In March 2017, we issued and sold an aggregate of 1,065,451 shares of our Series D Preferred Stock to certain new and existing investors at a purchase price of $32.85 per share, for aggregate consideration of $35.0 million.
3. In April 2017 and May 2017, we issued and sold to certain of our existing stockholders an additional 52,127 shares of Series D Preferred Stock at a purchase price of $32.85 per share, for aggregate consideration of $1.7 million.

(b) Convertible Notes

1. In September 2015, we issued and sold convertible notes in the aggregate principal amount of $15.0 million. In March 2017, concurrently with our Series D Preferred Stock financing, the notes were converted into an aggregate of 687,474 shares of our Series C-2 Preferred Stock at a conversion price of approximately $28.40 per share.

(c) Stock Option Grants

1. On December 20, 2016, we granted stock options to purchase a total of 407,193 shares of common stock at an exercise price of $5.14 per share to eight employees pursuant to our 2010 Stock Incentive Plan, or the 2010 Plan.
2. On December 20, 2016, we granted stock options to purchase a total of 281,570 shares of our common stock at an exercise price of $5.14 to two executive officers and two directors pursuant to our 2010 Plan.
3. On December 20, 2016, we granted a stock option to purchase 288,790 shares of common stock at an exercise price of $16.31 per share to one executive officer pursuant to our 2010 Plan.
4. On January 23, 2017, we granted a stock option to purchase a total of 158,834 shares of common stock at an exercise price of $5.14 per share to one executive officer pursuant to our 2010 Plan.
5. On January 30, 2017, we granted stock options to purchase a total of 144,395 shares of common stock at an exercise price of $5.14 per share to one executive officer pursuant to our 2010 Plan.
6. On February 13, 2017, we granted stock options to purchase a total of 20,214 shares of common stock at an exercise price of $5.14 per share to two employees pursuant to our 2010 Plan.
7. On February 20, 2017, we granted a stock option to purchase 5,775 shares of common stock at an exercise price of $5.14 per share to one employee pursuant to our 2010 Plan.
8. On February 27, 2017, we granted a stock option to purchase 5,775 shares of common stock at an exercise price of $5.14 per share to one employee pursuant to our 2010 Plan.
9. On August 7, 2017, we granted stock options to purchase a total of 160,278 shares of common stock at an exercise price of $7.25 per share to nine employees pursuant to our 2010 Plan.
10. On September 12, 2017, we granted a stock option to purchase 28,879 shares of common stock at an exercise price of $7.25 per share to one employee pursuant to our 2010 Plan.

(d) Warrant Exercises

1. In May 2018, we issued to an existing stockholder 7,098 shares of common stock upon the exercise of warrants at an exercise price of $8.16 per share.

The offers, sales and issuances of the securities described in paragraphs (a) and (b) above were exempt from registration under the Securities Act in reliance on Regulation D of the Securities Act.

With respect to the shares of Series C-2 Preferred Stock issued upon conversion of the convertible notes in March 2017 described in paragraph (b) and the exercise of the warrants described in paragraph (d), the issuance of such shares was exempt from registration under Section 3(a)(9) of the Securities Act.

The grants of stock described in paragraph (c) above to our executive officers and directors were exempt from registration under Section 4(a)(2) of the Securities Act as transactions not involving any public offering. The remaining grants of stock options described in paragraph (c) above were exempt from registration under the Securities Act in reliance on Rule 701 as offers and sales of securities under written compensatory benefit plans and contracts relating to compensation in compliance with Rule 701. Each of the recipients of securities in any transaction exempt from registration either received or had adequate access, through employment, business or other relationships, to information about us.

All purchasers of securities in transactions exempt from registration pursuant to Regulation D described above represented to us in connection with their purchase that they were accredited investors, as defined in Rule 501 under the Securities Act, and were acquiring the securities for investment purposes only and not with a view to, or for sale in connection with, any distribution thereof and that they could bear the risks of the investment and could hold the securities for an indefinite period of time. The purchasers received written disclosures that the

securities had not been registered under the Securities Act and that any resale must be made pursuant to a registration statement or an available exemption from the registration requirements of the Securities Act.

There were no underwriters employed in connection with any of the transactions set forth in this Item 15.

In addition, upon the completion of our initial public offering in October 2017, all outstanding shares of our convertible preferred stock automatically converted into an aggregate of 25,068,556 shares of common stock. The issuance of such shares was exempt from registration under Section 3(a)(9) of the Securities Act.

**Item 16. Exhibits and Financial Statement Schedules.**

(a) Exhibits

| Exhibit Number | Exhibit Description | Incorporated by Reference | | | Filed Herewith |
|---|---|---|---|---|---|
| | | Form | Date | Number | |
| 1.1 | Form of Underwriting Agreement. | | | | x |
| 2.1 | Exchange Agreement, dated as of June 7, 2010, by and among the Registrant, OptiNose AS and the other signatories thereto (the Registrant hereby agrees to furnish supplementally a copy of any omitted schedules to the SEC upon request). | S-1 | 9/18/2017 | 2.1 | |
| 3.1 | Fourth Amended and Restated Certificate of Incorporation of OptiNose, Inc. | 8-K | 10/18/2017 | 3.1 | |
| 3.2 | Amended and Restated Bylaws of OptiNose, Inc. | 8-K | 10/18/2017 | 3.2 | |
| 4.1 | Form of Common Stock Certificate. | S-1/A | 10/3/2017 | 4.1 | |
| 4.2 | Second Amended and Restated Registration Rights Agreement, dated March 24, 2017, by and among the Registrant and certain of its stockholders. | S-1 | 9/18/2017 | 4.2 | |
| 4.3 | Second Amended and Restated Shareholders' Agreement, dated March 24, 2017, by and among the Registrant and certain of its stockholders. | S-1 | 9/18/2017 | 4.3 | |
| 4.4 | Form of Warrant issued by the Registrant on June 7, 2010. | S-1 | 9/18/2017 | 4.4 | |
| 4.5 | First Amendment to the Second Amended and Restated Shareholders Agreement, dated October 2, 2017, by and among the Registrant and certain of its stockholders. | S-1/A | 10/11/2017 | 4.5 | |
| 4.6 | Stockholders' Agreement, dated October 2, 2017, by and among OptiNose, Inc. and certain of its stockholders. | S-1/A | 10/3/2017 | 4.6 | |
| 4.7 | First Amendment to the Second Amended and Restated Registration Rights Agreement, dated October 2, 2017, by and among the Registrant and certain of its stockholders. | S-1/A | 10/11/2017 | 4.7 | |
| 5.1 | Opinion of Hogan Lovells US LLP. | | | | x |
| 10.1 | Form of Indemnification Agreement.+ | 10-K | 3/13/2018 | 10.1 | |
| 10.2 | Employment Agreement, dated October 12, 2017, between OptiNose US, Inc. and Peter K. Miller.+ | 8-K | 10/18/2017 | 10.1 | |
| 10.3 | Employment Agreement, dated October 12, 2017, between OptiNose US, Inc. and Ramy A. Mahmoud.+ | 8-K | 10/18/2017 | 10.2 | |
| 10.4 | Employment Agreement, dated October 12, 2017, between OptiNose US, Inc. and Thomas E. Gibbs.+ | 8-K | 10/18/2017 | 10.3 | |

| | | | | | |
|---|---|---|---|---|---|
| 10.5 | Employment Agreement, dated October 12, 2017, between OptiNose US, Inc. and Keith A. Goldan.+ | 8-K | 10/18/2017 | 10.4 | |
| 10.6 | Employment Agreement, dated October 12, 2017, between OptiNose US, Inc. and Michael F. Marino.+ | 8-K | 10/18/2017 | 10.5 | |
| 10.7 | Amended and Restated 2010 Stock Incentive Plan.+ | S-1/A | 10/3/2017 | 10.7 | |
| 10.8 | Form of Non-Qualified Stock Option Agreement Granted Under the 2010 Stock Incentive Plan (Relating to Success Pool Grants).+ | S-1/A | 10/3/2017 | 10.8 | |
| 10.9 | Form of Non-Qualified Stock Option Agreement Granted Under the 2010 Stock Incentive Plan (Relating to Option Pool Grants).+ | S-1/A | 10/3/2017 | 10.9 | |
| 10.10 | Form of Non-Qualified Stock Option Agreement Granted Under the 2010 Stock Incentive Plan.+ | S-1/A | 10/3/2017 | 10.10 | |
| 10.11 | License Agreement, dated as of July 1, 2013, by and between OptiNose AS and Avanir Pharmaceuticals, Inc.† | S-1 | 9/18/2017 | 10.11 | |
| 10.12 | First Amendment of License Agreement, dated as of April 25, 2014, by and between OptiNose US, Inc. and Avanir Pharmaceuticals, Inc.† | S-1 | 9/18/2017 | 10.12 | |
| 10.13 | Amendment to License Agreement, dated as of August 6, 2015, by and between OptiNose AS and Avanir Pharmaceuticals, Inc.† | S-1 | 9/18/2017 | 10.13 | |
| 10.14 | Supply Agreement, dated July 1, 2017, by and between Hovione Inter Ltd and OptiNose US, Inc., OptiNose UK, Ltd and OptiNose AS.† | S-1 | 9/18/2017 | 10.14 | |
| 10.15 | Manufacture and Supply Agreement, dated as of August 18, 2017, by and among OptiNose US, Inc., OptiNose UK Ltd. and OptiNose AS and Contract Pharmaceuticals Limited Canada.† | S-1 | 9/18/2017 | 10.15 | |
| 10.16 | Manufacturing Services Agreement, dated as of August 31, 2017, by and among OptiNose US, Inc., OptiNose UK Ltd. and OptiNose AS and Ximedica, LLC.† | S-1 | 9/18/2017 | 10.16 | |
| 10.17 | Form of Non-Qualified Stock Option Agreement Under the Amended and Restated 2010 Stock Incentive Plan.+ | S-1/A | 10/3/2017 | 10.17 | |
| 10.18 | 2017 Employee Stock Purchase Plan.+ | S-1/A | 10/3/2017 | 10.18 | |
| 10.19 | Note Purchase Agreement dated December 29, 2017, among OptiNose AS and OptiNose US, Inc., as the Issuers, OptiNose, Inc. as Parent and a Guarantor, and Athyrium Opportunities III Acquisition LP, as Collateral Agent and a Purchaser. | 10-K | 3/13/2018 | 10.19 | |
| 16.1 | Letter of PricewaterhouseCoopers LLP as to change in accountant, dated June 23, 2017. | S-1 | 9/18/2017 | 16.1 | |
| 21.1 | List of Subsidiaries. | 10-K | 3/13/2018 | 10.19 | |
| 23.1 | Consent of Ernst & Young LLP, independent registered public accounting firm. | | | | x |
| 23.2 | Consent of Hogan Lovells US LLP (included in Exhibit 5.1). | | | | x |
| 24.1 | Power of attorney (included in signature pages). | | | | x |
| 99.1 | Consent of Robert P. O'Neil. | | | | x |

† Portions of this exhibit (indicated by asterisks) have been omitted pursuant to a request for confidential treatment granted pursuant to Rule 406 under the Securities Act of 1933 and have been separately filed with the Securities and Exchange Commission.
+ Indicates management contract or compensatory plan.

**Item 17. Undertakings.**

The undersigned registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreement certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

The undersigned Registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

## SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the Borough of Yardley, Commonwealth of Pennsylvania, on the 4th day of June, 2018.

**OPTINOSE, INC.**

By: /s/ Peter K. Miller

Name: Peter K. Miller

Title: *Chief Executive Officer*

KNOW ALL BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Peter K. Miller and Keith A. Goldan, as his or her true and lawful attorney-in-fact and agent, with the full power of substitution, for him or her and in his or her name, place or stead, in any and all capacities, to sign any and all amendments to this registration statement (including post-effective amendments), and to sign any registration statement for the same offering covered by this registration statement that is to be effective upon filing pursuant to Rule 462(b) promulgated under the Securities Act, and all post-effective amendments thereto, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

| Signature | Title | Date |
|---|---|---|
| /s/ Peter K. Miller<br>Peter K. Miller | Chief Executive Officer and Director (Principal Executive Officer) | June 4, 2018 |
| /s/ Keith A. Goldan<br>Keith A. Goldan | Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer) | June 4, 2018 |
| /s/ Joseph C. Scodari<br>Joseph C. Scodari | Chairman of the Board of Directors | June 4, 2018 |
| /s/ Larry G. Pickering<br>Larry G. Pickering | Vice Chairman of the Board of Directors | June 4, 2018 |
| /s/ Sriram Venkataraman<br>Sriram Venkataraman | Director | June 4, 2018 |
| /s/ William F. Doyle<br>William F. Doyle | Director | June 4, 2018 |
| /s/ Joshua A. Tamaroff<br>Joshua A. Tamaroff | Director | June 4, 2018 |
| /s/ Wilhelmus Groenhuysen<br>Wilhelmus Groenhuysen | Director | June 4, 2018 |
| /s/ Sandra L. Helton<br>Sandra L. Helton | Director | June 4, 2018 |

**Exhibit 1.1**

**[●] Shares**

**OptiNose, Inc.**

**UNDERWRITING AGREEMENT**

[●], 2018

JEFFERIES LLC
PIPER JAFFRAY & CO.
As Representatives of the several Underwriters

c/o JEFFERIES LLC
520 Madison Avenue
New York, New York 10022

c/o PIPER JAFFRAY & CO.
800 Nicollet Mall, Suite 800
Minneapolis, MN 55402

Ladies and Gentlemen:

**Introductory.** OptiNose, Inc., a Delaware corporation (the "**Company**"), proposes to issue and sell to the several underwriters named in Schedule A (the "**Underwriters**") an aggregate of [●] shares of its common stock, par value $0.001 per share (the "**Shares**"); and the stockholders of the Company named in Schedule B (collectively, the "**Selling Stockholders**") severally propose to sell to the Underwriters an aggregate of [●] Shares, with each Selling Stockholder selling the amount set forth opposite such Selling Stockholder's name in Schedule B. The [●] Shares to be sold by the Company and the [●] Shares to be sold by the Selling Stockholders are collectively called the "**Firm Shares**." In addition, the Company has granted to the Underwriters an option to purchase up to an additional [●] Shares and the Selling Stockholders have severally granted to the Underwriters an option to purchase up to an additional [●] Shares, with each Selling Stockholder selling up to the amount set forth opposite such Selling Stockholder's name in Schedule B, all as provided in Section 2. The additional [●] Shares to be sold by the Company and the additional [●] Shares to be sold by the Selling Stockholders pursuant to such option are collectively called the "**Optional Shares**." The Firm Shares and, if and to the extent such option is exercised, the Optional Shares are collectively called the "**Offered Shares**." Jefferies LLC ("**Jefferies**") and Piper Jaffray & Co. ("**Piper Jaffray**") have agreed to act as representatives of the several Underwriters (in such capacity, the "**Representatives**") in connection with the offering and sale of the Offered Shares. To the extent there are no additional underwriters listed on Schedule A, 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 registration statement on Form S-1, File No. 333-[●] which contains a form of prospectus to be used in connection with the public offering and sale of the Offered Shares. 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 any information deemed to be a part thereof at the time of effectiveness pursuant to Rule 430A 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 Offered Shares 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 prospectus, in the form first used by the Underwriters to confirm sales of the Offered Shares 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, is called the "**Prospectus**." The preliminary prospectus dated [●], 2018 describing the Offered Shares and the offering thereof is called the "**Preliminary Prospectus**," and the Preliminary Prospectus and any other prospectus in preliminary form that describes the Offered Shares and the offering thereof and is used prior to the filing of the Prospectus is called a "**preliminary prospectus**." As used herein, "**Applicable Time**" is [●] [a.m.][p.m.] (New York City time) on [●], 2018. 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 together with the free writing prospectuses, if any, identified in Schedule C hereto and the pricing information set forth on Schedule C hereto. As used herein, **"Road Show"** means a "road show" (as defined in Rule 433 under the Securities Act) relating to the offering of the Offered Shares contemplated hereby that is a "written communication" (as defined in Rule 405 under the Securities Act). As used herein, "**Section 5(d) Written Communication**" means each written communication (within the meaning of Rule 405 under the Securities Act) that is made in reliance on Section 5(d) of the Securities Act by the Company or any person authorized to act on behalf of the Company to one or more potential investors that are qualified institutional buyers ("**QIBs**") and/or institutions that are accredited investors ("**IAIs**"), as such terms are respectively defined in Rule 144A and Rule 501(a) under the Securities Act, to determine whether such investors might have an interest in the offering of the Offered Shares; "**Section 5(d) Oral Communication**" means each oral communication, if any, made in reliance on Section 5(d) of the Securities Act by the Company or any person authorized to act on behalf of the Company made to one or more QIBs and/or one or more IAIs to determine whether such investors might have an interest in the offering of the Offered Shares; "**Marketing Materials**" means any materials or information provided to investors by, or with the approval of, the Company in connection with the marketing of the offering of the Offered Shares, including any roadshow or investor presentations made to investors by the Company (whether in person or electronically); and "**Permitted Section 5(d) Communication**" means the Section 5(d) Written Communication(s) and Marketing Materials listed on Schedule D attached hereto.

All references in this Agreement to (i) the Registration Statement, any preliminary prospectus (including the Preliminary Prospectus), or the Prospectus, or 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**") and (ii) the Prospectus shall be deemed to include any "electronic Prospectus" provided for use in connection with the offering of the Offered Shares as contemplated by Section 3(A)(n) of this Agreement.

The Company and each of the Selling Stockholders, acting severally and not jointly, hereby confirm its respective agreements with the Underwriters as follows:

**Section 1. Representations and Warranties.**

**A. Representations and Warranties of the Company.** 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 the Commission's satisfaction with all requests of the Commission for additional or supplemental information, if any. 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 knowledge of the Company, are contemplated or threatened by the Commission.

**(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 Offered Shares. 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 (including any preliminary prospectus wrapper) 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), as then amended or supplemented by the Company, will not, contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in light of the circumstances under which they were made, not misleading. The Prospectus (including any Prospectus wrapper), as of its date, did not, and at the First Closing Date and at each applicable Option Closing Date, will not, contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The representations and warranties set forth in the 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 of the Offered Shares 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 or retention where required and legending, 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 Offered Shares did not, does not and will not include any information that conflicted, conflicts or will conflict with the information contained in the Registration Statement, the Prospectus or any preliminary prospectus and not superseded or modified. The representations and warranties set forth in the immediately preceding sentence do not apply to statements made in reliance upon and in conformity with information relating to any Underwriters 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. Except for the free writing prospectuses, if any, identified in Schedule C, 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, which consent shall not be unreasonably withheld, 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 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 Offered Shares, the Company has not distributed and will not distribute any offering material in connection with the offering and sale of the Offered Shares other than the Registration Statement, the Time of Sale Prospectus, the Prospectus, the free writing prospectuses, if any, identified on Schedule C hereto or any free writing prospectus reviewed and consented to by the Representatives, which consent shall not be unreasonably withheld, and any Permitted Section 5(d) Communications.

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

**(f)** ***Authorization of the Offered Shares.*** The Offered Shares which are to be issued by the Company have been duly authorized for issuance and sale pursuant to this Agreement and, when issued and delivered by the Company against payment therefor pursuant to this Agreement, will be validly issued, fully paid and nonassessable, and the issuance and sale of such Offered Shares is not subject to any preemptive rights, rights of first refusal or other similar rights to subscribe for or purchase such Offered Shares.

**(g)** ***No Applicable Registration or Other Similar Rights.*** There are no persons with registration or other similar rights to have any equity or debt securities registered for sale under the Registration Statement or included in the offering contemplated by this Agreement, other than the Selling Stockholders with respect to the Offered Shares to be sold by such Selling Stockholders included in the Registration Statement, except for such rights as have been duly waived.

**(h)** ***No Material Adverse Change.*** Except as otherwise disclosed or incorporated by reference 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 would 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, 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, or has entered into any transactions not in the ordinary course of business; and (iii) there has not been any material decrease in the capital stock or any material increase in any short-term or long-term indebtedness of the Company or its subsidiaries and there has been no dividend or distribution of any kind declared, paid or made by the Company or any repurchase or redemption by the Company or any of its subsidiaries of any class of capital stock.

**(i)** ***Independent Accountants.*** To the knowledge of the Company, 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) 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 Securities Exchange Act of 1934, as amended ,and the rules and regulations promulgated thereunder (collectively, the "**Exchange Act**") and the rules of the Public Company Accounting Oversight Board ("**PCAOB**"), (ii) 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) 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.

**(j)** ***Financial Statements.*** The financial statements filed with the Commission as a part of, or incorporated by reference into, 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. Such financial statements have been prepared in conformity with generally accepted accounting principles as applied in the United States on a consistent basis throughout the periods involved, except as may be expressly stated in the related notes thereto. No other financial statements or supporting schedules are required to be included in the Registration Statement, the Time of Sale Prospectus or the Prospectus. The interactive data in eXtensible Business Reporting Language incorporated by reference into the Registration Statement fairly presents the information called for in all material respects and has been prepared in accordance with the Commission's rules and guidelines applicable thereto. The financial data set forth in each of the Registration Statement, the Time of Sale Prospectus and the Prospectus under the captions "Prospectus Summary—Summary Consolidated Financial Data," "Selected Consolidated 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 or incorporated by reference in the Registration Statement, the Time of Sale Prospectus and the Prospectus. All disclosures contained or incorporated by reference in the Registration Statement, any preliminary prospectus or 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.

**(k)** ***Company's Accounting System.*** The Company and each of its subsidiaries make and keep books and records that are accurate in all material respects and maintain a system of internal accounting controls designed to, and which the Company believes is 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 incorporated by reference into the Registration Statement, the Time of Sale Prospectus and the Prospectus fairly presents the information called for in all material respects and is prepared in accordance with the Commission's rules and guidelines applicable thereto.

**(l)** ***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. Since the end of the Company's most recent audited fiscal year, there have been no significant deficiencies or material weakness in the Company's internal control over financial reporting (whether or not remediated) and there has been no change in the Company's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting. 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.

**(m)** ***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 or incorporated by reference in the Registration Statement, the Time of Sale Prospectus and the Prospectus and to enter into and perform its obligations under this Agreement. The Company is duly qualified as a foreign corporation to transact business and is in good standing in the Commonwealth of Pennsylvania 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 or in good standing would not reasonably be expected, individually or in the aggregate, to have a material adverse effect on the condition (financial or other), earnings, business, properties, operations, assets, liabilities or prospects of the Company and its subsidiaries, considered as one entity (a "**Material Adverse Effect**").

**(n)** ***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 and is validly existing as a corporation 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 or incorporated by reference in the Registration Statement, the Time of Sale Prospectus and the Prospectus. 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 to be in good standing would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect. All of the issued and outstanding capital stock or other equity or ownership interests of each of the Company's subsidiaries have been duly authorized and validly issued, are fully paid and nonassessable and are owned by the Company, directly or through subsidiaries, free and clear of any security interest, mortgage, pledge, lien, encumbrance or adverse claim. None of the outstanding capital stock in any subsidiary was issued in violation of preemptive or similar rights of any securityholder of such subsidiary. The Company does not own or control, directly or indirectly, any corporation, association or other entity other than the subsidiaries listed in Exhibit 21 to the Registration Statement. OptiNose UK Ltd. is not a "significant subsidiary" (as defined in Rule 405 under the Securities Act).

**(o)** ***Capitalization and Other Capital Stock Matters.*** The authorized, issued and outstanding capital stock of the Company is as set forth or incorporated by reference 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, as described or incorporated by reference in the Registration Statement, the Time of Sale Prospectus and the Prospectus). The Shares (including the Offered Shares) conform in all material respects to the description thereof contained in the Time of Sale Prospectus. All of the issued and outstanding Shares (including the Shares owned by the Selling Stockholders) 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 was issued in violation of any preemptive rights, rights of first refusal or other similar rights to subscribe for or purchase securities of the Company. 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 or incorporated by reference 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 or incorporated by reference in the Registration Statement, the Time of Sale Prospectus and the Prospectus accurately and fairly present, in all material respects, the information required to be shown with respect to such plans, arrangements, options and rights.

**(p)** ***Stock Exchange Listing.*** The Offered Shares have been approved for listing on The Nasdaq Global Market ("***Nasdaq***"), subject only to official notice of issuance.

**(q)** ***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 by-laws, 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, 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 in Existing Instruments as would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect. The Company's execution, delivery and performance of 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 Offered Shares (including the use of proceeds from the sale of the Offered Shares 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 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, except, in the case of clauses (ii) and (iii) above, as would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect. 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 the Financial Industry Regulatory Authority, Inc. ("**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.

**(r)** ***Compliance with Laws.*** The Company and its subsidiaries have been and are in compliance with all applicable laws, rules and regulations, except where failure to be so in compliance would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect.

**(s)** ***No Material Actions or Proceedings.*** There is no action, suit, proceeding, inquiry or investigation brought by or before any governmental entity now pending or, to the knowledge of the Company, threatened, against or affecting the Company or any of its subsidiaries, which would reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect 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, would not reasonably be expected to have a Material Adverse Effect. No material labor dispute with the employees of the Company or any of its subsidiaries, or with the employees of any principal supplier, manufacturer, or contractor of the Company, exists or, to the knowledge of the Company, is threatened or imminent.

**(t)** ***Intellectual Property Rights.*** The Company and its subsidiaries own, or have obtained valid and enforceable licenses for, the inventions, patent applications, patents, trademarks, trade names, service names, copyrights, trade secrets and other intellectual property described or incorporated by reference in the Registration Statement, the Time of Sale Prospectus and the Prospectus as being owned or licensed by them or which, to the Company's knowledge, are necessary for the conduct of their respective businesses as currently conducted or as currently proposed to be conducted in the Registration Statement, the Time of Sale Prospectus and the Prospectus (collectively, "**Intellectual Property**"). To the Company's knowledge: (i) there are no third parties who have rights to any Intellectual Property, except for customary reversionary rights of third-party licensors with respect to Intellectual Property that is disclosed or incorporated by reference in the Registration Statement, the Time of Sale Prospectus and the Prospectus as licensed to the Company or one or more of its subsidiaries, and the Company and its subsidiaries have taken all reasonable steps necessary to secure their interests in the Intellectual Property from their employees and contractors; (ii) there is no infringement by third parties of any Intellectual Property; (iii) the Company is not infringing the intellectual property rights of third parties; (iv) the Company is the sole owner of the Intellectual Property owned by it and has the valid right to use the Intellectual Property; (v) there are no material defects in any of the patents or patent applications included in the Intellectual Property; (vi) the duties of candor and good faith required by the United States Patent and Trademark Office during the prosecution of the United States patents and patent applications included in the Intellectual Property have been complied with, and all such requirements in foreign offices having similar requirements applicable to the Company and its subsidiaries have been complied with; and (vii) no employee of the Company is in or has been in violation 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. There is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others: (A) challenging the Company's rights in or to any Intellectual Property; (B) challenging the validity, enforceability or scope of any Intellectual Property; or (C) asserting that the Company or any of its subsidiaries infringes or otherwise violates, or would, upon the commercialization of any product or service described or incorporated by reference in the Registration Statement, the Time of Sale Prospectus or the Prospectus as under development, infringe, misappropriate or violate, any patent, trademark, trade name, service name, copyright, trade secret or other proprietary rights of others. The Company and its subsidiaries have complied in all material respects with the terms of each agreement pursuant to which Intellectual Property has been licensed to the Company or any subsidiary, and all such agreements are in full force and effect. The product

candidates described or incorporated by reference in the Registration Statement, the Time of Sale Prospectus and the Prospectus as under development by the Company or any subsidiary fall within the scope of the claims of one or more patents or patent applications owned by, or exclusively licensed to, the Company or any subsidiary.

**(u)** ***All Necessary Permits, etc*****.** The Company and its subsidiaries possess such valid and current certificates, authorizations or permits required by state, federal or foreign regulatory agencies or bodies to conduct their respective businesses as currently conducted and as described or incorporated by reference in the Registration Statement, the Time of Sale Prospectus or the Prospectus ("**Permits**"). Neither the Company nor any of its subsidiaries is in violation of, or in default under, any of the Permits or has received any notice of proceedings relating to the revocation or modification of, or non-compliance with, any such Permit.

**(v)** ***Title to Properties*****.** Neither the Company nor any Subsidiary owns any real property. The Company and its subsidiaries have good and marketable title to all of the personal property and other assets reflected as owned in the financial statements referred to in Section 1(A)(j) 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 would not reasonably be expected, individually or in the aggregate, to materially affect the value of such property or materially interfere with the use thereof. 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.

**(w)** ***Tax Law Compliance*****.** The Company and its subsidiaries have filed all necessary federal, state and foreign income and franchise tax returns or have properly requested extensions thereof and have paid all 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)(j) 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 subsidiaries has not been finally determined.

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

**(y)** ***Compliance with Environmental Laws*****.** Except as would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect: (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 in all material respects with their requirements; (iii) there are no pending or, to the knowledge of the Company, threatened administrative, regulatory or judicial actions, suits, demands, demand letters, claims, liens, notices of noncompliance or violation, investigation or proceedings relating to any Environmental Law against the Company or any of its subsidiaries; and (iv) there are no orders for clean-up or remediation, or an action, suit or proceeding pending or, to the knowledge of the Company threatened, 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.

**(z)** ***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, to the knowledge of the Company, 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 material liability under (i) Title IV of ERISA with respect to termination of, or withdrawal from, any "employee benefit plan" or (ii) Sections 412, 4971, 4975 or 4980B of the Code. Each employee benefit plan established or maintained by the Company, 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 reasonably be expected to cause the loss of such qualification.

**(aa)** ***Company Not an "Investment Company."*** The Company is not, and will not be, either after receipt of payment for the Offered Shares 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" under the Investment Company Act of 1940, as amended (the **"Investment Company Act"**).

**(bb)** ***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 would reasonably be expected to cause or result in stabilization or manipulation of the price of the Shares or of 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 Offered Shares or otherwise, and has taken no action which would directly or indirectly violate Regulation M.

**(cc)** ***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 under Item 404 of Regulation

S-K to be described or incorporated by reference in the Registration Statement, the Time of Sale Prospectus or the Prospectus that have not been described as required.

**(dd)** ***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, to the knowledge of the Company, the holders of any securities (debt or equity) or options to acquire any securities of the Company in connection with the offering of the Offered Shares 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.

**(ee)** ***Parties to Lock-Up Agreements*****.** The Company has furnished to the Underwriters a letter agreement in the form attached hereto as <u>Exhibit A</u> (the "**Lock-up Agreement**") from the Selling Stockholders and each of the directors and officers (as defined in Rule 16a-1(f) under the Exchange Act) of the Company. If any additional persons shall become directors or officers (as defined in Rule 16a-1(f) under the Exchange Act) 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 officer of the Company, to execute and deliver to the Representatives a Lock-up Agreement.

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

**(gg)** ***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 applicable law or of the character required to be disclosed in the Registration Statement, the Time of Sale Prospectus or the Prospectus.

**(hh)** ***Anti-Corruption Laws.*** None of the Company, any of its subsidiaries or any of their respective affiliates, directors or officers, employees or, to the Company's knowledge, any of the Company or its subsidiaries respective agents, representatives or other persons associated with or acting on behalf of the Company or any of its subsidiaries or their respective affiliates 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 an act in furtherance of an offer, promise or authorization of any direct or indirect unlawful payment or benefit to any domestic government official, "foreign official" (as defined in the U.S. Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations thereunder (collectively, the "**FCPA**")) or employee, including of any government-owned or controlled entity or a public international organization, or any person acting in an official capacity for or on behalf of any of the foregoing, or any political party or party official or candidate for political office; (iii) violated or is in violation of any provision of the FCPA or any applicable law or regulation implementing the OECD Convention on Combating Bribery in Foreign Public Officials in International Business Transactions, or committed an offence under the Bribery Act of 2010 of the United Kingdom, or any other applicable non-U.S. anti-bribery or anti-corruption laws; or (iv) made, offered, agreed, requested or taken an act in further of any unlawful or improper bribe, rebate, payoff, influence payment, kickback or other unlawful payment or benefit; and the Company and its subsidiaries and, to the Company's knowledge, its affiliates have conducted their respective businesses in compliance with the applicable anti-bribery and anti-corruption laws and have instituted and maintain and continue to maintain policies and

procedures designed to ensure, and which are reasonably expected to continue to ensure, continued compliance with such laws and with the representation and warranty contained herein.

**(ii)** ***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, including those 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 knowledge of the Company, threatened.

**(jj)** ***Sanctions Laws*****.** Neither the Company nor its subsidiaries, or any of their respective directors, officers or employees or, to the knowledge of the Company, any agent, affiliate or other person associated with or acting on behalf of the Company or its subsidiaries is currently subject to or the target of any U.S. sanctions administered by the U.S. Government (including, without limitation, the Office of Foreign Assets Control of the U.S. Department of the Treasury or the U.S. Department of State and including, without limitation, the designation as a "specially designated national" or "blocked person"), the United Nations Security Council, the European Union, Her Majesty's Treasury or other relevant sanctions authority (collectively, "**Sanctions**"), nor is the Company or its subsidiaries located, organized or resident in a country or territory that is subject to or the target of Sanctions, including, without limitation, Crimea, Cuba, Iran, North Korea, Sudan and Syria (each, a "**Sanctioned Country**"); and the Company and its subsidiaries will not directly or indirectly use the proceeds of this offering, or lend, contribute or otherwise make available such proceeds to any joint venture partner or other person or entity, for the purpose of (i) financing or facilitating the activities of or business with any person that currently is subject to or the target of any Sanctions, (ii) financing or facilitating any activities of or business in any Sanctioned Country or (iii) financing or using such proceeds in any other manner that will result in a violation by any person (including any person participating in the transaction whether as underwriter, advisor, investor or otherwise) of Sanctions. For the past five years, each of the Company and its subsidiaries has not engaged in, is not now engaged in, and will not engage in, any dealings or transactions with any person that at the time of the dealing or transaction is or was subject to or the target of Sanctions or with any Sanctioned Country.

**(kk)** ***Brokers*****.** Except as disclosed in the Company's FINRA filing, there is no broker, finder or other party that is entitled to receive from the Company or its subsidiaries any brokerage or finder's fee or other fee or commission as a result of any transactions contemplated by this Agreement.

**(ll)** ***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 or incorporated by reference 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.

**(mm)** ***No Outstanding Loans or Other Extensions of Credit***. The Company does not have any outstanding extension of credit, in the form of a personal loan, to or for any director or executive officer (or

equivalent thereof) of the Company except for such extensions of credit as are expressly permitted by Section 13(k) of the Exchange Act.

**(nn)** ***Emerging Growth Company Status***. From the time of initial confidential submission of the Registration Statement to the Commission (or, if earlier, the first date on which the Company engaged in any Section 5(d) Written Communication or any Section 5(d) Oral Communication) through the date hereof, the Company has been and is an "emerging growth company," as defined in Section 2(a) of the Securities Act (an "**Emerging Growth Company**").

**(oo)** ***Communications***. The Company (i) has not alone engaged in communications with potential investors in reliance on Section 5(d) of the Securities Act other than Permitted Section 5(d) Communications with the consent of the Representatives with entities that are QIBs or IAIs and (ii) has not authorized anyone other than the Representatives to engage in such communications; the Company reconfirms that the Representatives have been authorized to act on its behalf in undertaking Marketing Materials, Section 5(d) Oral Communications and Section 5(d) Written Communications; as of the Applicable Time, each Permitted Section 5(d) Communication, when considered together with the Time of Sale Prospectus, did not, as of the Applicable Time, include an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading; and each Permitted Section 5(d) Communication, if any, does not, as of the date hereof, conflict with the information contained or incorporated by reference in the Registration Statement, the Preliminary Prospectus and the Prospectus; and the Company has filed publicly on EDGAR at least 48 hours prior to the Applicable Time, any confidentially submitted registration statement and registration statement amendments relating to the offer and sale of the Offered Shares.

**(pp)** ***Clinical Data and Regulatory Compliance.*** The preclinical tests and clinical trials, and other studies (collectively, "studies") that are described in, or the results of which are referred to in, the Registration Statement, the Time of Sale Prospectus or the Prospectus were and, if still pending, are being conducted in all material respects in accordance with the protocols, procedures and controls designed and approved for such studies and with standard medical and scientific research procedures; each description of the results of such studies is accurate and complete in all material respects and fairly presents the data derived from such studies, and the Company and its subsidiaries have no knowledge of any other studies the results of which are inconsistent with, or otherwise call into question, the results described or referred to or incorporated by reference in the Registration Statement, the Time of Sale Prospectuses or the Prospectus; the Company and its subsidiaries have made all such filings and obtained all such approvals as may be required by the Food and Drug Administration of the U.S. Department of Health and Human Services or any committee thereof or from any other U.S. or foreign government or drug or medical device regulatory agency, or health care facility Institutional Review Board (collectively, the "**Regulatory Agencies**"), except where such failure or non-compliance would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect; neither the Company nor any of its subsidiaries has received any notice of, or correspondence from, any Regulatory Agency requiring the termination, suspension or modification of any clinical trials that are described or referred to or incorporated by reference in the Registration Statement, the Time of Sale Prospectus or the Prospectus; and the Company and its subsidiaries have each operated and currently are in compliance in all material respects with all applicable rules, regulations and policies of the Regulatory Agencies.

**(qq)** ***Compliance with Health Care Laws***. The Company and its subsidiaries are, and at all times have been, in compliance with all Health Care Laws, except where failure to be so in compliance would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect. For purposes of this Agreement, "**Health Care Laws**" means: (i) the Federal Food, Drug, and Cosmetic Act (21 U.S.C. Section

301 et seq.) and the regulations promulgated thereunder; (ii) all applicable federal, state, local and all applicable foreign health care related fraud and abuse laws, including, without limitation, the U.S. Anti-Kickback Statute (42 U.S.C. Section 1320a-7b(b)), the Civil Monetary Penalties Laws (42 U.S.C. Section 1320a-7a), the U.S. Civil False Claims Act (31 U.S.C. Section 3729 et seq.), all applicable federal, state, local and foreign criminal laws relating to health care fraud and abuse, including but not limited to 18 U.S.C. Sections 286 and 287, and the health care fraud criminal provisions under the U.S. Health Insurance Portability and Accountability Act of 1996 ("**HIPAA**") (42 U.S.C. Section 1320d et seq.), the exclusion laws (42 U.S.C. Section 1320a-7), the statutes, regulations and directives of applicable government funded or sponsored healthcare programs, and the regulations promulgated pursuant to such statutes; (iii) HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act (42 U.S.C. Section 17921 et seq.), and the data privacy and security regulations promulgated thereunder; (iv) the Patient Protection and Affordable Care Act of 2010 (Pub. Law 111-148), as amended by the Health Care and Education Affordability Reconciliation Act of 2010 (Pub. Law 111-152), the regulations promulgated thereunder; (v) the U.S. Controlled Substances Act (21 U.S.C. Section 801 et seq.); (vi) quality, safety and accreditation requirements under applicable federal, state, local or foreign laws or regulatory bodies, including, but not limited to, all laws applicable to ownership, testing, development, manufacture, packaging, processing, use, distribution, marketing, advertising, labeling, promotion, sale, offer for sale, storage, import, export or disposal of any product manufactured or distributed by the Company; and (vii) all other local, state, federal, national, supranational and foreign laws, relating to the regulation of the Company or its subsidiaries. Neither the Company nor its subsidiaries have received written notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any court or arbitrator or governmental or regulatory authority or third party alleging that any product operation or activity is in violation of any Health Care Laws nor, to the Company's knowledge, is any such claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action threatened. Except as would not reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect, the Company and its subsidiaries have filed, maintained or submitted all material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Health Care Laws, and all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were complete and accurate on the date filed in all material respects (or were corrected or supplemented by a subsequent submission). Neither the Company nor its subsidiaries are a party to any corporate integrity agreements, monitoring agreements, consent decrees, settlement orders, or similar agreements with or imposed by any governmental or regulatory authority. Additionally, neither the Company, its subsidiaries nor any of their respective employees, officers or directors has been excluded, suspended or debarred from participation in any U.S. federal health care program or human clinical research or, to the knowledge of the Company, is subject to a governmental inquiry, investigation, proceeding, or other similar action that would reasonably be expected to result in debarment, suspension, or exclusion.

**(rr)** ***No Contract Terminations.*** Neither the Company nor any of its subsidiaries has sent or received any communication regarding termination of, or intent not to renew, any of the contracts or agreements referred to or described in any preliminary prospectus, the Prospectus or any free writing prospectus, or referred to or described in, or filed as an exhibit to, the Registration Statement, and no such termination or non-renewal has been threatened by the Company or any of its subsidiaries or, to the Company's knowledge, any other party to any such contract or agreement, which threat of termination or non-renewal has not been rescinded as of the date hereof.

**(ss)** ***Dividend Restrictions*****.** 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, except, in each case, for such restrictions or prohibitions imposed under applicable laws.

**(tt)** ***No Indebtedness***. Except as otherwise disclosed or incorporated by reference in the Registration Statement, the Time of Sale Prospectus and the Prospectus, the Company and its subsidiaries have no outstanding indebtedness.

Any certificate signed by any officer of the Company or any of its subsidiaries and delivered to any Underwriter or to counsel for the Underwriters in connection with the offering, or the purchase and sale, of the Offered Shares shall be deemed a representation and warranty by the Company to each Underwriter as to the matters covered thereby.

The Company has a reasonable basis for making each of the representations set forth in this Section 1(A) 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.

**B. Representations and Warranties of the Selling Stockholders**. Each Selling Stockholder, severally and not jointly, represents, warrants and covenants to each Underwriter as follows:

**(a)** All consents, approvals, authorizations and orders necessary for the execution and delivery by such Selling Stockholder of this Agreement, and for the sale and delivery of the Offered Shares to be sold by such Selling Stockholder hereunder, have been obtained; and such Selling Stockholder has full right, power and authority to enter into this Agreement and to sell, assign, transfer and deliver the Offered Shares to be sold by such Selling Stockholder hereunder.

**(b)** Such Selling Stockholder has, and immediately prior to the First Closing Date (or the applicable Option Closing Date, as the case may be) such Selling Stockholder will have valid and unencumbered title to the Offered Shares to be sold by such Selling Stockholder hereunder at the First Closing Date (or the applicable Option Closing Date, as the case may be); and, upon delivery of such Offered Shares and payment therefor pursuant hereto, valid and unencumbered title to such Offered Shares will pass to the several Underwriters. Upon payment for the Offered Shares to be sold by such Selling Stockholder pursuant to this Agreement, delivery of such Offered Shares, as directed by the Underwriters, to Cede & Co. ("**Cede**") or such other nominee as may be designated by the Depository Trust Company ("**DTC**"), registration of such Offered Shares in the name of Cede or such other nominee and the crediting of such Offered Shares on the books of DTC to securities accounts of the Underwriters (assuming that neither DTC nor any such Underwriter has notice of any adverse claim (within the meaning of Section 8-105 of the New York Uniform Commercial Code (the "UCC")) to such Offered Shares), (A) DTC shall be a "protected purchaser" of such Offered Shares within the meaning of Section 8-303 of the UCC, (B) under Section 8-501 of the UCC, the Underwriters will acquire a valid security entitlement in respect of such Offered Shares and (C) no action based on any "adverse claim", within the meaning of Section 8-102 of the UCC, to such Offered Shares may be asserted against the Underwriters with respect to such security entitlement; for purposes of this representation, such Selling Stockholder may assume that when such payment, delivery and crediting occur, (x) such Offered Shares will have been registered in the name of Cede or another nominee designated by DTC, in each case on the Company's share registry in accordance with its certificate of incorporation, bylaws and applicable law, (y) DTC will be registered as a "clearing corporation" within the meaning of Section 8-102 of the UCC and (z) appropriate entries to the accounts of the several Underwriters on the records of DTC will have been made pursuant to the UCC.

**(c)** The sale of the Offered Shares to be sold by such Selling Stockholder hereunder and the compliance by such Selling Stockholder with this Agreement and the consummation of the transactions herein contemplated will not (A) conflict with or result in a breach or violation of any of the terms or provisions of, or constitute a default under, any statute, indenture, mortgage, deed of trust, loan agreement, lease or other agreement or instrument to which such Selling Stockholder is a party or by which such Selling Stockholder is bound or to which any of the property or assets of such Selling Stockholder is subject, (B) result in any violation of the provisions of the certificate of incorporation or by-laws of such Selling Stockholder if such Selling Stockholder is a corporation, the partnership agreement of such Selling Stockholder if such Selling Stockholder is a partnership or other similar organization documents of such Selling Stockholder if such Selling Stockholder is not a natural person, corporation or partnership or (C) result in any violation of any statute or any order, rule or regulation of any court or governmental agency or body having jurisdiction over such Selling Stockholder or any of its subsidiaries or any property or assets of such Selling Stockholder, except, in the case of (A) and (C), as would not, individually or in the aggregate, affect the validity of the Offered Shares to be sold by such Selling Stockholders or reasonably be expected to materially impact such Selling Stockholder's ability to perform its obligations under this agreement; and no consent, approval, authorization, order, registration or qualification of or with any such court or governmental body or agency is required for the performance by such Selling Stockholder of its obligations under this Agreement and the consummation by such Selling Stockholder of the transactions contemplated by this Agreement in connection with the Offered Shares to be sold by such Selling Stockholder hereunder, except the registration under the Securities Act of the Offered Shares, the approval by FINRA of the underwriting terms and arrangements and such consents, approvals, authorizations, orders, registrations or qualifications as may be required under state securities or "blue sky" laws in connection with the purchase and distribution of the Offered Shares by the Underwriters.

**(d)** On or prior to the date of the Preliminary Prospectus, such Selling Stockholder executed and delivered to the Underwriters an agreement substantially in the form of Exhibit A hereto.

**(e)** To the extent that any statements or omissions made in the Registration Statement, any Preliminary Prospectus, the Prospectus or any amendment or supplement thereto are made in reliance upon and in conformity with written information furnished to the Company by such Selling Stockholder expressly for use therein, such Registration Statement and Preliminary Prospectus did, and the Prospectus and any further amendments or supplements to the Registration Statement and the Prospectus will, when they become effective or are filed with the Commission, as the case may be, conform in all material respects to the requirements of the Securities Act and the rules and regulations of the Commission thereunder and not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein (in the case of the Preliminary Prospectus and the Prospectus and any amendments or supplements thereto, in the light of the circumstances under which they were made) not misleading.

**(f)** Such Selling Stockholder has not taken and will not take, directly or indirectly, any action that is designed to or that has constituted or might reasonably be expected to cause or result in stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Offered Shares.

**(g)** Such Selling Stockholder has delivered or will deliver to you prior to or at the First Closing Date a properly completed and executed United States Treasury Department Form W-9 (or other applicable form or statement specified by Treasury Department regulations in lieu thereof) together with all required attachments to such form.

**(h)** The obligations of the Selling Stockholders hereunder shall not be terminated by operation of law, whether by the dissolution of any partnership or corporation, or by the occurrence of any other event; if any such partnership or corporation should be dissolved, or if any other such event should occur, before the delivery of the Offered Shares to be sold by such Selling Stockholder hereunder, the Offered Shares to be sold by such Selling Stockholder hereunder shall be delivered by or on behalf of the Selling Stockholders in accordance with the terms and conditions of this Agreement.

Any certificate signed by such Selling Stockholder and delivered to any Underwriter or to counsel for the Underwriters in connection with this Offering shall be deemed a representation and warranty by such Selling Stockholder to each Underwriter as to the matters covered thereby. Notwithstanding anything to the contrary in this Agreement, the representations and warranties of the Selling Stockholders set forth in this Section 1(B) are made only as of the date hereof and the First Closing Date (or the applicable Option Closing Date, as the case may be).

Such Selling Stockholder acknowledges that the Underwriters and, for purposes of the opinions to be delivered pursuant to Section 6 hereof, counsel to the Selling Stockholders 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 Offered Shares**.

**(a)** ***The Firm Shares.*** Upon the terms herein set forth, (i) the Company agrees to issue and sell to the several Underwriters an aggregate of [●] Firm Shares and (ii) the Selling Stockholders, severally and not jointly, agree to sell to the several Underwriters an aggregate of [●] Firm Shares, with each Selling Stockholder selling the number of Firm Shares set forth opposite such Selling Stockholder's name on Schedule B. 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 and the Selling Stockholders 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 and the Selling Stockholders shall be $[●] per share.

**(b)** ***The First Closing Date.*** Delivery of certificates for the Firm Shares to be purchased by the Underwriters and payment therefor shall be made at the offices of Cooley LLP, 1114 Avenue of the Americas, New York, New York 10036 (or such other place as may be agreed to by the Company and the Representatives) at 9:00 a.m. New York City time, on [●], 2018, or such other time and date not later than 1:30 p.m. New York City time, on [●], 2018 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 and the Selling Stockholders hereby acknowledge 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, the Selling Stockholders or the Representatives to recirculate to the public copies of an amended or supplemented Prospectus or a delay as contemplated by the provisions of Section 11.

**(c)** ***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 and the Selling Stockholders, severally and not jointly, hereby grant an option to the several Underwriters to purchase, severally and not jointly, up to an aggregate of [●] Optional Shares from the Company and the Selling Stockholders 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 and the Selling Stockholders, which notice may be given at any time within 30 days from 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 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 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**," shall be determined by the Representatives and shall not be earlier than three or later than five full business days after delivery of such notice of exercise. If any Optional Shares are to be purchased, (a) 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 (b) the Company and each Selling Stockholder agrees, severally and not jointly, 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 set forth in Schedule B opposite the name of such Selling Stockholder (or, in the case of the Company, as the number of Optional Shares to be sold by the Company as set forth in the paragraph "Introductory" of this Agreement) bears to the total number of Optional Shares. The Representatives may cancel the option at any time prior to its expiration by giving written notice of such cancellation to the Company and the Selling Stockholders.

**(d)** ***Public Offering of the Offered Shares*****.** The Representatives hereby advise the Company and the Selling Stockholders 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 Offered Shares as soon after this Agreement has been executed and the Registration Statement has been declared effective as the Representatives, in their sole judgment, have determined is advisable and practicable.

**(e)** ***Payment for the Offered Shares*****.**

(i) Payment for the Offered Shares to be sold by the Company 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. Payment for the Offered Shares to be sold by each Selling Stockholder 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 such Selling Stockholder.

(ii) It is understood that the Representatives have been authorized, for their own account 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 and Piper Jaffray, individually and not as the Representatives of the Underwriters, may (but shall not be obligated to) make payment for any Offered Shares 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.

**(f)** ***Delivery of the Offered Shares*****.** The Company and each Selling Stockholder, severally and not jointly, shall deliver, or cause to be delivered to the Representatives for the accounts of the several

Underwriters certificates for the Firm Shares to be sold by it at the First Closing Date, against release of a wire transfer of immediately available funds for the amount of the purchase price therefor. The Company and each Selling Stockholder, severally and not jointly, shall also deliver, or cause to be delivered to the Representatives for the accounts of the several Underwriters, the Optional Shares the Underwriters have agreed to purchase from it at the First Closing Date or the applicable Option Closing Date, as the case may be, against the release of a wire transfer of immediately available funds for the amount of the purchase price therefor. If Jefferies so elects, delivery of the Offered Shares may be made by credit to the accounts designated by Jefferies through The Depository Trust Company's full fast transfer or DWAC programs. The Offered Shares 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). 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.**

The Company further covenants and agrees with each Underwriter as follows:

**(a)** ***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 second business day succeeding the date of this Agreement and during the period when a prospectus relating to the Offered Shares 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 Offered Shares, 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.

**(b)** ***Representatives' Review of Proposed Amendments and Supplements.*** During the period when a prospectus relating to the Offered Shares 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 without the Representatives' prior written consent, which consent shall not be unreasonably withheld, conditioned or delayed. Prior to amending or supplementing any preliminary prospectus, the Time of Sale Prospectus or the Prospectus, 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, which consent shall not be unreasonably withheld, conditioned or delayed. 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.

**(c)** ***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, which consent shall not be unreasonably withheld, conditioned or delayed. 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 Offered Shares (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 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, which consent shall not be unreasonably withheld, conditioned or delayed.

**(d)** ***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.

**(e)** ***Amendments and Supplements to Time of Sale Prospectus.*** If the Time of Sale Prospectus is being used to solicit offers to buy the Offered Shares 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 reasonable 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)(b) and Section 3(A)(c) 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.

**(f)** ***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 Offered Shares, the Company shall promptly advise the Representatives in writing (which may be by email) of: (i) the receipt of any comments of, or requests for additional or supplemental information from, the Commission relating to the Registration Statement; (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 as soon as reasonably practicable. Additionally, the Company agrees that it shall comply with all applicable provisions of Rule 424(b), Rule 433 and Rule 430A 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.

**(g)** ***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)(b) and Section 3(A)(c) 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)(b) or Section 3(A)(c).

**(h)** ***Blue Sky Compliance.*** The Company shall cooperate with the Representatives and counsel for the Underwriters to qualify or register the Offered Shares for sale under (or obtain exemptions from the application of) the state securities or blue sky laws or Canadian provincial securities laws (or other foreign 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 Offered Shares. 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 Offered Shares 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 as soon as reasonably practicable.

**(i)** ***Use of Proceeds.*** The Company intends to apply the net proceeds from the sale of the Offered Shares 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 and shall report the use of such proceeds as may be required under Rule 463 under the Securities Act.

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

**(k)** ***Earnings Statement.*** The Company will make generally available to its security holders and to the Representatives as soon as practicable 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, which earnings statement shall be deemed to have been made generally available by the Company if the Company is in compliance with its reporting obligations pursuant to the Exchange Act, if such compliance satisfies the conditions of Rule 158, and if such earnings statement is made available on EDGAR.

**(l)** ***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 Offered Shares 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 Offered Shares 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 Nasdaq all reports and documents required to be filed under the Exchange Act.

**(m)** ***Listing.*** The Company will use its best efforts to list, subject to notice of issuance, the Offered Shares sold by the Company on Nasdaq.

**(n)** ***Company to Provide Copy of the Prospectus in Form That May be Downloaded from the Internet.*** If requested by the Representatives, the Company shall cause to be prepared and delivered, at its expense, within one business day from the effective date of this Agreement, to the Representatives an "**electronic Prospectus**" to be used by the Underwriters in connection with the offering and sale of the Offered Shares. As used herein, the term "**electronic Prospectus**" means a form of the Prospectus, and any amendment or supplement thereto, that meets each of the following conditions: (i) it shall be encoded in an electronic format, reasonably satisfactory to the Representatives, that may be transmitted electronically by the Representatives and the other Underwriters to offerees and purchasers of the Offered Shares; (ii) it shall disclose the same information as the paper Prospectus, except to the extent that graphic and image material cannot be disseminated electronically, in which case such graphic and image material shall be replaced in the electronic Prospectus with a fair and accurate narrative description or tabular representation of such material, as appropriate; and (iii) it shall be in or convertible into a paper format or an electronic format, reasonably satisfactory to the Representatives, that will allow investors to store and have continuously ready access to the Prospectus at any future time, without charge to investors (other than any fee charged for subscription to the Internet as a whole and for on-line time). The Company hereby confirms that it has included or will include in the Prospectus filed pursuant to EDGAR or otherwise with the Commission and in the Registration Statement at the time it was declared effective an undertaking that, upon receipt of a request by an investor or his or her representative, the Company shall transmit or cause to be transmitted promptly, without charge, a paper copy of the Prospectus.

**(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 90th day following the date of the Prospectus (such period being referred to herein as the "**Lock-up Period**"), the Company will not, without the prior written consent of the Representatives (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 Offered Shares); or (viii) publicly announce the intention to do any of the foregoing; *provided, however*, that the Company may (A) effect the transactions contemplated hereby; (B) issue Shares or options to purchase Shares, or issue Shares upon exercise of options, pursuant to any stock option, stock bonus, employee stock purchase or other stock plan or arrangement described or incorporated by reference in the Registration Statement, the Time of Sale Prospectus and the Prospectus; (C) issue Shares pursuant to the conversion or exchange of convertible or exchangeable securities; (D) file a registration statement on Form S-8 to register Shares issuable pursuant to the terms of a stock option, stock bonus, employee stock purchase or other stock incentive plan or arrangement described or incorporated by reference in the Registration Statement, the Time of Sale Prospectus and the Prospectus; (E) issue Shares in connection with any joint venture, commercial or collaborative relationship or the acquisition or license by the Company of the securities, businesses, property or other assets of another person or entity; provided, however, that in the case of clause (E), such Shares shall not in the aggregate exceed 5% of the Company's outstanding shares of common stock on a fully diluted basis after giving effect to the sale of the Offered Shares contemplated by this Agreement; and (F) assist any stockholder of the Company in the establishment of a trading plan by such stockholder pursuant to Rule 10b5-1 under the Exchange Act for the transfer of shares of Common Stock, provided that such plan does not provide for the transfer of shares of Common Stock during the Lock-Up Period, and the establishment of such plan does not require or otherwise result in any public filings or other public announcement of such plan during such Lock-Up Period and such plan is otherwise permitted to be implemented during the Lock-up Period pursuant to the terms of the Lock-Up Agreement, if any, between such stockholder and the Underwriters in connection with the offering of the Offered Shares. 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)** ***Future Reports to the Representatives.*** During the period of five years hereafter, the Company will furnish to the Representatives, c/o Jefferies, at 520 Madison Avenue, New York, New York 10022, Attention: Global Head of Syndicate, and c/o Piper Jaffray, at 800 Nicollet Mall, Suite 800, Minneapolis, Minnesota 55402, Attention: Prospectus Delivery Department: (i) as soon as practicable after the end of each fiscal year, copies of the Annual Report of the Company containing the balance sheet of the Company as of the close of such fiscal year and statements of income, stockholders' equity and cash flows for the year then ended and the opinion thereon of the Company's independent public or certified public accountants; (ii) as soon as practicable after the filing thereof, copies of each proxy statement, Annual Report on Form 10-K, Quarterly Report on Form 10-Q, Current Report on Form 8-K or other public report filed by the Company with the Commission, FINRA or any securities exchange; and (iii) as soon as available, copies of any report or communication of the Company furnished or made available generally to holders of its capital stock; *provided, however,* that the requirements of this Section 3(p) shall be satisfied to the extent that such reports, statement, communications, financial statements or other documents are available on EDGAR.

**(q)** ***Investment Limitation*****.** The Company shall not invest or otherwise use the proceeds received by the Company from its sale of the Offered Shares 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.

**(r)** ***No Stabilization or Manipulation; Compliance with Regulation M*****.** The Company will not take, and will ensure that no affiliate of the Company will take, directly or indirectly, any action designed to

or that might reasonably be expected to 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 Offered Shares or otherwise, and the Company will, and shall cause each of its affiliates to, comply with all applicable provisions of Regulation M.

**(s)** ***Enforce Lock-Up Agreements.*** During the Lock-up Period, the Company will enforce all agreements between the Company and any of its securityholders 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, 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, directors and securityholders pursuant to Section 6(l) hereof.

**(t)** ***Company to Provide Interim Financial Statements.*** Prior to the First Closing Date and each applicable Option Closing Date, the Company will furnish the Underwriters, as soon as reasonably practicable after 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 or incorporated by reference in the Registration Statement and the Prospectus.

**(u)** ***Amendments and Supplements to Permitted Section 5(d) Communications***. If at any time following the distribution of any Permitted Section 5(d) Communication, during the period when a prospectus relating to the Offered Shares is required to be delivered, there occurred or occurs an event or development as a result of which such Permitted Section 5(d) Communication included or would include an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances existing at that subsequent time, not misleading, the Company will promptly notify the Representatives and will promptly amend or supplement, at its own expense, such Permitted Section 5(d) Communication to eliminate or correct such untrue statement or omission.

**(v)** ***Emerging Growth Company Status***. The Company will promptly notify the Representatives if the Company ceases to be an Emerging Growth Company at any time prior to the later of (i) the time when a prospectus relating to the Offered Shares is not required by the Securities Act to be delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule) and (ii) the expiration of the Lock-Up Period (as defined herein).

The Representatives, on behalf of the several Underwriters, 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 or the Selling Stockholders' obligations hereunder and in connection with the transactions contemplated hereby, including without limitation (i) all expenses incident to the issuance and delivery of the Offered Shares (including all printing and engraving 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 Offered Shares 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, each Permitted Section 5(d) Communication, and all amendments and supplements thereto, and this Agreement, (vi) all filing fees, reasonable and documented 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 Offered Shares for offer and sale under the state securities or blue sky laws or the provincial securities laws of Canada, and, if requested by the Representatives, preparing and printing a "Blue Sky Survey" or memorandum and a "Canadian wrapper", and any supplements thereto, advising the Underwriters of such qualifications, registrations and exemptions, (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 distribution of the Offered Shares, including any related filing fees and the reasonable and documented 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", any Permitted Section 5(d) Communication or any Section 5(d) Oral Communication undertaken in connection with the offering of the Offered Shares, 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 one half of the cost of any aircraft chartered in connection with the road show, with the other half being paid by the Underwriters, (ix) the fees and expenses associated with listing the Offered Shares on Nasdaq, and (x) all other fees, costs and expenses of the nature referred to in Item 13 of Part II of the Registration Statement; provided, however, that the costs, fees and expenses of counsel, consultants and any other third parties engaged by the Underwriters in clauses (vi) and (vii) shall in no event exceed $15,000 in the aggregate. 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 and their own travel and lodging expenses.

Each Selling Stockholder, severally and not jointly, further agrees with each Underwriter to pay (directly or by reimbursement) all fees and expenses incident to the performance of its obligations under this Agreement that are not otherwise specifically provided for herein or otherwise, including but not limited to (i) fees and expenses of counsel and other advisors for such Selling Stockholder, and (ii) expenses and taxes payable by such Selling Stockholder and incident to the sale and delivery of the Offered Shares to be sold by such Selling Stockholder to the Underwriters hereunder.

This Section 4 shall not affect or modify any separate, valid agreement relating to the allocation of payment of expenses between the Company, on the one hand, and any Selling Stockholder, on the other hand.

**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 Offered Shares 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 and the Selling Stockholders 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 and the Selling Stockholders of their respective 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 accounting firm 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 Auditing Standard No. 6101 (or any successor bulletin), with respect to the audited and unaudited financial statements of the Company and certain financial information contained or incorporated by reference 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 430A 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 430A, 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) FINRA shall have raised no objection to the fairness and reasonableness of the underwriting terms and arrangements.

**(c)** ***No Material Adverse 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, in the judgment of the Representatives there shall not have occurred any Material Adverse Change.

**(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 of Hogan Lovells US LLP, counsel for the Company, dated as of such date, in form and substance satisfactory to the Representatives.

**(e)** ***Opinion of Intellectual Property Counsel for the Company.*** On each of the First Closing Date and each Option Closing Date, the Representatives shall have received the opinion of Dennemeyer & Associates, LLC, intellectual property counsel for the Company, with respect to certain patents and proprietary rights, dated as of such date, in form and substance satisfactory to the Representatives.

**(f)** ***Opinion of Counsel to OptiNose AS***. On each of the First Closing Date and each Option Closing Date, the Representatives shall have received the opinion of Aabø-Evensen & Co Advokatfirma AS, special local counsel OptiNose AS, dated as of such date, in form and substance satisfactory to the Representatives.

**(g)** ***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 of Cooley LLP, counsel for the Underwriters

in connection with the offer and sale of the Offered Shares, in form and substance satisfactory to the Representatives, dated as of such date.

**(h)** ***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, solely in their respective capacities as such, 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.

**(i)** ***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, 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.

**(j)** ***Opinion of Counsel for the Selling Stockholders*****.** On each of the First Closing Date and each Option Closing Date, the Representatives shall have received the opinion of (1) Ropes & Gray LLP, United States counsel for the Selling Stockholders, dated as of such date, in form and substance satisfactory to the Representatives, and (2) Conyers Dill & Pearman Limited, Bermuda counsel for certain of the Selling Stockholders, dated as of such date, in form and substance satisfactory to the Representatives.

**(k)** ***Selling Stockholders' Certificate*****.** On each of the First Closing Date and each Option Closing Date, the Representatives shall receive a written certificate executed each Selling Stockholder, dated as of such date, to the effect that:

(i) the representations, warranties and covenants of such Selling Stockholder set forth in Section 1.B) of this Agreement are true and correct with the same force and effect as though expressly made by such Selling Stockholder on and as of such date; and

(ii) such Selling Stockholder has complied in all material respects with all the agreements and satisfied all the conditions on its part to be performed or satisfied at or prior to such date.

**(l)** ***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 A hereto from each director and officer and each Selling Stockholder, and each such agreement shall be in full force and effect on each of the First Closing Date and each Option Closing Date.

**(m)** ***Rule 462(b) Registration Statement.*** In the event that a Rule 462(b) Registration Statement is filed in connection with the offering contemplated by this Agreement, 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.

**(n)** ***Approval of Listing***. At the First Closing Date, the Offered Shares sold by the Company shall have been approved for listing on Nasdaq, subject only to official notice of issuance.

**(o)** ***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 Offered Shares 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 Offered Shares 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 the Representatives to the Company and the Selling Stockholders 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(i), (iv) or (v), or if the sale to the Underwriters of the Offered Shares on the First Closing Date is not consummated because of any refusal, inability or failure on the part of the Company or the Selling Stockholders 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 Underwriters in connection with the proposed purchase and the offering and sale of the Offered Shares, including, but not limited to, reasonable and documented fees and disbursements of counsel, printing expenses, travel expenses, postage, facsimile and telephone charges; *provided*, however, that in the event any such termination is effected after the First Closing Date but prior to any Option Closing Date with respect to the purchase of any Optional Shares, the Company shall reimburse the Underwriters for their fees in accordance with Section 4 herein, and shall only be obligated to reimburse the Underwriters for all of their out of pocket expenses, including the reasonable fees and disbursements of counsel for the Underwriters, incurred after the First Closing Date in connection with the proposed purchase of any such Optional Shares.

**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 Offered Shares 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 (A) (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 Marketing Material, any Section 5(d) Written Communication 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, in the light of the circumstances under which they were made, not misleading; or (B) the violation of any laws or regulations of foreign jurisdictions where Offered Shares have been offered or sold; and to reimburse each Underwriter and each such affiliate, director, officer, employee, agent and controlling person for any and all reasonable expenses (including the fees and disbursements of counsel) as such expenses are 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 Selling Stockholder or Underwriter furnished to the Company by such Selling Stockholder or the Representatives, as applicable, 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, any Section 5(d) Written Communication or the Prospectus (or any amendment or supplement thereto), it being understood and agreed that, with respect to the Underwriters, the only such information consists of the information described in Section 9(c) 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)** Each Selling Stockholder, severally and not jointly, 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 and all losses, claims, damages or liabilities, joint or several, to which they or any of them 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 Offered Shares 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 such Selling Stockholder), 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 Marketing Material, any Section 5(d) Written Communication 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, in the light of the circumstances under which they were made, not misleading, but, in the case of clauses (i) and (ii) above, only to the extent that such untrue statement or alleged untrue statement or omission or alleged omission was made in the Registration Statement, or any amendment thereto, any preliminary prospectus, the Time of Sale Prospectus, any free

writing prospectus that the Company has used, referred to or filed with the prior approval of such Selling Stockholder, or is required to file, pursuant to Rule 433(d) of the Securities Act, any Marketing Material approved by such Selling Stockholder, any Section 5(d) Written Communication approved by such Selling Stockholder or the Prospectus (or any amendment or supplement to the foregoing), in reliance upon and in conformity with written information furnished to the Company by such Selling Stockholder expressly for use therein in the preparation of the answers to Item 7 of Form S-1; and will reimburse each Underwriter for any legal or other expenses reasonably incurred by such Underwriter in connection with investigating or defending any such action or claim as such expenses are incurred.

**(c)** ***Indemnification of the Company, its Directors and Officers and the Selling Stockholders***. 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, the Selling Stockholders and each person, if any, who controls the Company or any Selling Stockholder 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, Selling Stockholder 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, any Section 5(d) Written Communication 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, 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, such Section 5(d) Written Communication 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, Selling Stockholder or controlling person for any and all expenses (including the fees and disbursements of counsel) as such expenses are incurred by the Company, or any such director, officer, Selling Stockholder or controlling person in connection with investigating, defending, settling, compromising or paying any such loss, claim, damage, liability, expense or action. The Company and each of the Selling Stockholders 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, any Section 5(d) Written Communication 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," the first sentence of the first paragraph under the section entitled "Commission and Expenses," the first sentence of the first paragraph under the section entitled "Stabilization," the first paragraph and the first sentence of the second paragraph under the section entitled "Other Activities and Relationships," and the first sentence of the first paragraph under the section entitled "Electronic Distribution," each under the caption "Underwriting" in the Preliminary Prospectus and the Prospectus. The indemnity agreement set forth in this Section 9(c) shall be in addition to any liabilities that each Underwriter may otherwise have.

**(d)** ***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 so to 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 so to assume the defense of such action and approval by the indemnified party of counsel, such approval not to be unreasonably withheld, delayed or conditioned, the indemnifying party will not be liable to such indemnified party under this Section 9 for any reasonable and documented 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 one local counsel for each jurisdiction), representing the indemnified parties who are parties to such action), which counsel (together with one local counsel for each jurisdiction) for the indemnified parties shall be selected by the Representatives (in the case of counsel for the indemnified parties referred to in Section 9(a) or (b) above) or by the Company and the Selling Stockholders (in the case of counsel for the indemnified parties referred to in Section 9(c) above)) or (ii) the indemnifying party shall not have employed counsel reasonably 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.

**(e)** ***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(d) 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, together with the terms of such settlement and (ii) such indemnifying party shall not have reimbursed the indemnified party in accordance with such request prior to the date of such settlement; provided, that an indemnifying party shall not be liable for any such settlement effected without its consent if such indemnifying party, prior to the date of such settlement, (1) reimburses such indemnified party in accordance with such

request for the amount of such fees and expenses of counsel as the indemnifying party believes in good faith to be reasonable and owing in accordance with the provisions of this Section 9, and (2) provides written notice to the indemnified party that the indemnifying party disputes in good faith the reasonableness of the unpaid balance of such fees and expenses or its liability with respect thereto. 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 (other than as a result of the limitations on indemnification specified therein), then the Company, each Selling Stockholder, severally and not jointly, and the Underwriters 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 or such Selling Stockholder, as applicable, on the one hand, and the Underwriters, on the other hand, from the offering of the Offered Shares pursuant to this Agreement 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 or such Selling Stockholder, as applicable, 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 or such Selling Stockholder, as applicable, on the one hand, and the Underwriters, on the other hand, in connection with the offering of the Offered Shares pursuant to this Agreement shall be deemed to be in the same respective proportions as the total proceeds from the offering of the Offered Shares pursuant to this Agreement (before deducting expenses) received by the Company or such Selling Stockholder, as applicable, 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 Offered Shares as set forth on such cover. The relative fault of the Company or such Selling Stockholder, as applicable, on the one hand, and the Underwriters, on the other hand, shall be determined by reference to, among other things, whether any such untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact relates to information supplied by the Company or such Selling Stockholder, as applicable, 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(d), any documented 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(d) 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(d) for purposes of indemnification.

The Company, the Selling Stockholders 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 Offered Shares 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. The liability of each Selling Stockholder under such Selling Stockholder's representations and warranties contained in Section 1(B) hereof and under the indemnity and contribution agreements contained in Section 9 and this Section 10 shall be limited to an amount equal to the gross proceeds received by such Selling Stockholder in respect of the Offered Shares sold by such Selling Stockholder hereunder (after deducting underwriting discounts and commissions, but before giving effect to expenses). The Company and the Selling Stockholders may agree, as among themselves and without limiting the rights of the Underwriters under this Agreement, as to the respective amounts of such liability for which they each shall be responsible.

**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 Offered Shares that it or they have agreed to purchase hereunder on such date, and the aggregate number of Offered Shares which such defaulting Underwriter or Underwriters agreed but failed or refused to purchase does not exceed 10% of the aggregate number of the Offered Shares to be purchased on such date, the Representatives may make arrangements satisfactory to the Company and the Selling Stockholders for the purchase of such Offered Shares 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 Offered Shares 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 Offered Shares and the aggregate number of Offered Shares with respect to which such default occurs exceeds 10% of the aggregate number of Offered Shares to be purchased on such date, and arrangements satisfactory to the Representatives and the Company for the purchase of such Offered Shares are not made within 48 hours after such default, this Agreement shall terminate without liability of any party (other than the breaching Representative) 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.

As used in this Agreement, the term "**Underwriter**" shall be deemed to include any person substituted for a defaulting Underwriter under this Section 11. Any action taken under this Section 11 shall not relieve any defaulting Underwriter from liability in respect of any default of such Underwriter under this Agreement.

**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 and the Selling Stockholders 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 Nasdaq, or trading in securities generally on either Nasdaq or The New York Stock Exchange shall have been suspended or limited, or minimum or maximum prices shall have been generally established on any of such stock exchanges; (ii) a general banking moratorium shall have been declared by any federal or New York 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 Offered Shares 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 or the Selling Stockholders to any Underwriter, except to the extent that the Company shall be obligated to reimburse the expenses of the Representatives and the Underwriters pursuant to Section 4 or Section 7 hereof or (b) any Underwriter or the Selling Stockholders 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 and each Selling Stockholder, severally and not jointly, acknowledges and agrees that (a) the purchase and sale of the Offered Shares pursuant to this Agreement, including the determination of the public offering price of the Offered Shares and any related discounts and commissions, is an arm's-length commercial transaction between the Company and each of the Selling Stockholders, on the one hand, and the several Underwriters, on the other hand, (b) in connection with the offering contemplated hereby 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 such Selling Stockholder, or the Company's other stockholders, creditors, employees or any other party, (c) no Underwriter has assumed or will assume an advisory or fiduciary responsibility in favor of the Company or such Selling Stockholder with respect to the offering contemplated hereby or the process leading thereto (irrespective of whether such Underwriter has advised or is currently advising the Company or such Selling Stockholder on other matters) and no Underwriter has any obligation to the Company or such Selling Stockholder with respect to the offering contemplated hereby 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 such Selling Stockholder, and (e) the Underwriters have not provided any legal, accounting, regulatory or tax advice with respect to the offering contemplated hereby and the Company and such Selling Stockholder 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, of the Selling Stockholders 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, or the Selling Stockholders, as the case may be, and, anything herein to the contrary notwithstanding, will survive delivery of and payment for the Offered Shares 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<br>520 Madison Avenue<br>New York, New York 10022<br>Facsimile: (646) 619-4437<br>Attention: General Counsel |
| | Piper Jaffray & Co.<br>800 Nicollet Mall, Suite 800<br>Minneapolis, Minnesota 55402<br>Facsimile: (612) 303-1068<br>Attention: General Counsel |
| with a copy to: | Cooley LLP<br>1114 Avenue of the Americas<br>New York, New York 10036<br>Facsimile: (212) 479-6275<br>Attention: Divakar Gupta |
| If to the Company: | OptiNose, Inc.<br>1020 Stony Hill Road, Suite 300<br>Yardley, Pennsylvania 19067<br>Facsimile: (267) 395-2119<br>Attention: Chief Executive Officer and Chief Legal Officer |
| with a copy to: | Hogan Lovells US LLP<br>1735 Market Street, 23rd Floor<br>Philadelphia, Pennsylvania, 19103<br>Facsimile: (267) 675-4671<br>Attention: Steven J. Abrams |
| If to a Selling Stockholder: | To such Selling Stockholder<br>c/o Avista Capital Holdings LP<br>Hogan Lovells US LLP<br>65 East 55th Street, 18th Floor<br>New York, New York 10022<br>Facsimile: (212) [___]<br>Attention: Ben Silbert |
| with a copy to: | Ropes & Gray LLP<br>Prudential Tower<br>800 Boylston Street<br>Boston, Massachusetts 02199 |

Facsimile: (617) 951-7050
Attention: Craig E. Marcus

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 Offered Shares 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. 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 19. 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. 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.

*[signature pages follow]*

If the foregoing is in accordance with your understanding of our agreement, kindly sign and return to the Company and the Selling Stockholders 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,

**OPTINOSE, INC.**

By: ______________________________

Name: Peter K. Miller
Title: Chief Executive Officer

**AVISTA CAPITAL PARTNERS II, L.P.**

**By: Avista Capital Partners II GP, LLC, its General Partner**

By: ______________________________

Name: Ben Silbert

Title: Authorized Representative

**AVISTA CAPITAL PARTNERS (OFFSHORE) II, L.P.**

By: **Avista Capital Partners II GP, LLC, its General Partner**

By: ______________________________

Name: Ben Silbert

Title: Authorized Representative

**AVISTA CAPITAL PARTNERS (OFFSHORE) II-A, L.P.**

By: **Avista Capital Partners II GP, LLC, its General Partner**

By: ______________________________

Name: Ben Silbert

Title: Authorized Representative

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

**JEFFERIES LLC**
**PIPER JAFFRAY & CO.**

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

**JEFFERIES LLC**

By: ________________________________
Name:
Title:

**PIPER JAFFRAY & CO.**

By: ________________________________
Name:
Title:

**Schedule A**

| **Underwriters** | **Number of Firm Shares to be Purchased** |
| --- | --- |
| Jefferies LLC | |
| Piper Jaffray & Co. | |
| BMO Capital Markets Corp.. | |
| RBC Capital Markets, LLC | |
| Cantor Fitzgerald & Co. | |
| Total | |

**Schedule B**

| **Selling Stockholders** | **Number of Firm Shares to be Sold** | **Maximum Number of Optional Shares to be Sold** |
|---|---|---|
| Avista Capital Partners II, L.P. (a) | [●] | [●] |
| Avista Capital Partners (Offshore) II, L.P. (b) | [●] | [●] |
| Avista Capital Partners (Offshore) II-A, L.P. (b) | [●] | [●] |
| Total: | [●] | [●] |

(a) The Selling Stockholder is represented by Ropes & Gray LLP
(b) The Selling Stockholder is represented by Conyers Dill & Pearman Limited

**Schedule C**

**Free Writing Prospectuses Included in the Time of Sale Prospectus**

[None.]

**Pricing Information Included in the Time of Sale Prospectus**

| | |
|---|---|
| Price per share to the public: | $[●] |
| Number of shares being sold by the Company: | [●] |
| Number of shares potentially issuable pursuant to the option to purchase additional shares: | [●] |

**Schedule D**

**Permitted Section 5(d) Communications**

**Exhibit A**

**Form of Lock-up Agreement**

May 23, 2018

Jefferies LLC
A co-book running manager to be named by the Company
As Representatives of the Several Underwriters

c/o Jefferies LLC
520 Madison Avenue
New York, New York 10022

RE: OptiNose, Inc. (the "**Company**")

Ladies & Gentlemen:

The undersigned is an owner of shares of common stock, par value $0.001 per share, of the Company ("**Shares**") or of securities convertible into or exchangeable or exercisable for Shares. The Company and certain selling stockholders of the Company propose to conduct a public offering of Shares (the "**Offering**") for which Jefferies LLC and a co-book running manager to be named by the Company will act as the representatives (each a "**Representative**" and collectively the "**Representatives**") of the underwriters. The undersigned recognizes that the Offering will benefit each of the Company and the undersigned. The undersigned acknowledges that the underwriters are relying on the representations and agreements of the undersigned contained in this letter agreement in conducting the Offering and, at a subsequent date, in entering into an underwriting agreement (the "**Underwriting Agreement**") and other underwriting arrangements with the Company and certain selling stockholders of the Company with respect to the Offering.

Annex A sets forth definitions for capitalized terms used in this letter agreement that are not defined in the body of this letter agreement. Those definitions are a part of this letter agreement.

In consideration of the foregoing, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned hereby agrees that, during the Lock-up Period, subject to the exceptions set forth in this letter agreement, the undersigned will not (and will cause any Family Member not to), without the prior written consent of such Representative or Representatives as may be mutually agreed upon by the Company and the Representatives (the "**Designated Representative(s)**"), which consent may be withheld in its or their discretion:

- Sell or Offer to Sell any Shares or Related Securities currently or hereafter owned either of record or beneficially (as defined in Rule 13d-3 under the Exchange Act) by the undersigned or such Family Member,

- enter into any Swap,

- make any demand for, or exercise any right with respect to, the registration under the Securities Act of the offer and sale of any Shares or Related Securities, or cause to be filed a registration statement, prospectus or prospectus supplement (or an amendment or supplement thereto) with respect to any such registration, or

- publicly announce any intention to do any of the foregoing.

The foregoing will not apply to the registration of the offer and sale of the Shares, and the sale of the Shares to the underwriters, in each case as contemplated by the Underwriting Agreement. In addition, the foregoing restrictions shall not apply to (i) sales of Shares acquired in the Offering or after the completion of the Offering; provided that no filing under Section 16(a) of the Exchange Act shall be required or shall be voluntarily made in connection with such sales; (ii) the transfer of Shares or Related Securities by gift, (iii) the transfer of Shares or Related Securities by will or intestate succession to the legal representative, heir or beneficiary of the undersigned, (iv) the transfer of Shares or Related Securities to a trust whose beneficiaries consist exclusively of one or more of the undersigned and/or a member of the undersigned's Immediate Family, (v) transfers or dispositions of the undersigned's Shares or Related Securities to any corporation, partnership, limited liability company or other entity all of the beneficial ownership interests of which are held by the undersigned or any Family Member, (vi) distributions of the undersigned's Shares or Related Securities to limited partners, general partners, members, stockholders or other equityholders of the undersigned, (vii) by operation of law, including pursuant to a domestic order or negotiated divorce settlement or (viii) if the undersigned is a corporation, partnership, limited liability company, trust or other business entity, the transfer of Shares or Related Securities to another corporation, partnership, limited liability company, trust or other business entity that is a direct or indirect affiliate (as defined in Rule 405 promulgated under the Securities Act) of the undersigned or to any investment fund or other entity controlled or managed by, or under common control or management as, the undersigned, provided that any such transfer or distribution set forth in (ii) through (vii) above shall not involve a disposition for value; *provided, however*, that in any such case set forth in (ii) through (vii) above, it shall be a condition to such transfer that:

- each transferee executes and delivers to the Representatives an agreement in form and substance satisfactory to the Designated Representative(s) stating that such transferee is receiving and holding such Shares and/or Related Securities subject to the provisions of this letter agreement and agrees not to Sell or Offer to Sell such Shares and/or Related Securities, engage in any Swap or engage in any other activities restricted under this letter agreement except in accordance with this letter agreement (as if such transferee had been an original signatory hereto), and

- prior to the expiration of the Lock-up Period, no public disclosure or filing under the Exchange Act by any party to the transfer (donor, donee, transferor or transferee) shall be required, or made voluntarily, reporting a reduction in beneficial ownership of Shares or Related Securities in connection with such transfer.

Furthermore, notwithstanding the restrictions imposed by this letter agreement, the undersigned may (i) exercise an option to purchase Shares granted under any equity incentive plan or purchase shares under any stock purchase plan of the Company, each existing as of the date of the Prospectus and described or incorporated by reference in the Prospectus, *provided* that the Shares issued upon such exercise or purchase shall continue to be subject to the restrictions on transfer set forth in this letter agreement, (ii) establish a trading plan pursuant to Rule 10b5-1 under the Exchange Act for the transfer of Shares, *provided* that such plan does not provide for any transfers of Shares or Related Securities during the Lock-up Period and the entry into such plan is not publicly disclosed, including in any filing under the Exchange Act, during the Lock-up Period or (iii) transfer Shares or Related Securities (A) as forfeitures to satisfy tax withholding obligations of the undersigned in connection with the vesting or exercise of equity awards by the undersigned pursuant to the Company's equity incentive plan existing as of the date of the Prospectus and described or incorporated by reference in the Prospectus, (B) pursuant to a net exercise or cashless exercise (to satisfy exercise price or related withholding obligations) by the undersigned of outstanding equity awards pursuant to the Company's equity incentive plan existing as of the date of the Prospectus and described or incorporated

by reference in the Prospectus, *provided* that any Shares acquired upon the net exercise or cashless exercise of equity awards described in this clause (B) shall be subject to the restrictions set forth in this letter agreement, (C) pursuant to a bona fide third-party tender offer for all outstanding shares of the Company, merger, consolidation or other similar transaction made to all holders of the Company's securities involving a change of control of the Company (including, without limitation, the entering into any lock-up, voting or similar agreement pursuant to which the undersigned may agree to transfer, sell, tender or otherwise dispose of common stock or other such securities in connection with such transaction, or vote any common stock or other such securities in favor of any transaction), *provided* that in the event that such tender offer, merger, consolidation or other such transaction is not completed, such securities held by the undersigned shall remain subject to the provisions of this letter agreement, or (D) that may be deemed to have occurred as a result of the exercise of warrants, *provided* that the restrictions set forth in this letter agreement shall apply to any of the undersigned's Shares or Related Securities issued upon such exercise; *provided* that, in the case of a transfer pursuant to clause (A) or (B) above, if the undersigned is required to make a filing under the Exchange Act reporting a reduction in beneficial ownership of Shares during the Lock-up Period, the undersigned shall include a statement in such report to the effect that the purpose of such transfer was to cover tax obligations of the undersigned in connection with such exercise.

In the event that, during the Lock-up Period, the Representatives waive any prohibition set forth in this letter or any similar agreement on the transfer of Shares or Related Securities held by (a) any person or entity that has delivered a copy of this or a similar letter agreement to the Representatives and beneficially owns 1% or more of the outstanding Shares, calculated as of the closing of the Offering, or (b) any director or executive officer of the Company, the Representatives shall be deemed to have also waived the prohibitions set forth in this letter agreement that would otherwise have applied to the undersigned with respect to the same percentage of the undersigned's Shares or Related Securities as the relative percentage of aggregate Shares or Related Securities held by such party receiving the waiver that are subject to such waiver. Notwithstanding the foregoing, the provisions of this paragraph shall not apply if the waiver is effected solely to permit a transfer not involving a disposition for value and the transferee has agreed in writing to be bound by the same terms described in this letter agreement to the extent and for the duration that such terms remain in effect at the time of such transferor

The undersigned also agrees and consents to the entry of stop transfer instructions with the Company's transfer agent and registrar against the transfer of Shares or Related Securities held by the undersigned and the undersigned's Family Members, if any, except in compliance with the foregoing restrictions.

With respect to the Offering only, the undersigned waives any registration rights relating to registration under the Securities Act of the offer and sale of any Shares and/or any Related Securities owned either of record or beneficially by the undersigned, including any rights to receive notice of the Offering.

The undersigned confirms that the undersigned has not, and has no knowledge that any Family Member has, directly or indirectly, taken any action designed to or that might reasonably be expected to cause or result in the stabilization or manipulation of the price of any security of the Company to facilitate the sale of the Shares. The undersigned will not, and will cause any Family Member not to take, directly or indirectly, any such action.

Whether or not the Offering occurs as currently contemplated or at all depends on market conditions and other factors. The Offering will only be made pursuant to the Underwriting Agreement, the terms of which are subject to negotiation between the Company, certain stockholders of the Company and the underwriters.

The undersigned hereby represents and warrants that the undersigned has full power, capacity and authority to enter into this letter agreement. This letter agreement is irrevocable and will be binding on the undersigned and the successors, heirs, personal representatives and assigns of the undersigned.

Notwithstanding anything herein to the contrary, if (a) the initial closing of the Offering has not occurred prior to December 31, 2018, (b) after being executed, the Underwriting Agreement (other than the provisions thereof that survive termination) shall terminate or be terminated prior to payment for and delivery of the Shares to be sold thereunder or (c) the Company notifies the underwriters in writing that it does not intend to proceed with the Offering, then this letter agreement shall terminate and the undersigned shall be released from all obligations hereunder upon the earliest to occur of the events specified above.

This letter agreement shall be governed by, and construed in accordance with, the laws of the State of New York.

[*signature page follows*]

Very truly yours,

_______________________________
Name of Security Holder *(Print exact name*)

By: _______________________________
Signature

If not signing in an individual capacity:

_______________________________
Name of Authorized Signatory *(Print*)

_______________________________
Title of Authorized Signatory *(Print*)

*(indicate capacity of person signing if signing as custodian, trustee, or on behalf of an entity)*

**Certain Defined Terms**

**Used in Lock-up Agreement**

For purposes of the letter agreement to which this Annex A is attached and of which it is made a part:

- "**Call Equivalent Position**" shall have the meaning set forth in Rule 16a-1(b) under the Exchange Act.
- "**Exchange Act**" shall mean the Securities Exchange Act of 1934, as amended.
- "**Family Member**" shall mean the spouse of the undersigned, an immediate family member of the undersigned or an immediate family member of the undersigned's spouse, in each case living in the undersigned's household or whose principal residence is the undersigned's household (regardless of whether such spouse or family member may at the time be living elsewhere due to educational activities, health care treatment, military service, temporary internship or employment or otherwise).
- "**Immediate Family**" shall have the meaning set forth in Rule 16a-1(e) under the Exchange Act.
- "**Lock-up Period**" shall mean the period beginning on the date the Company publicly files a Registration Statement on Form S-1 with the Securities and Exchange Commission in connection with the Offering and continuing through the close of trading on the date that is 90 days after the date of the Prospectus (as defined in the Underwriting Agreement).
- "**Put Equivalent Position**" shall have the meaning set forth in Rule 16a-1(h) under the Exchange Act.
- "**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.
- "**Securities Act**" shall mean the Securities Act of 1933, as amended.
- "**Sell or Offer to Sell**" shall mean to:
  - sell, offer to sell, contract to sell or lend,
  - effect any short sale or establish or increase a Put Equivalent Position or liquidate or decrease any Call Equivalent Position
  - pledge, hypothecate or grant any security interest in, or
  - in any other way transfer or dispose of,

  in each case whether effected directly or indirectly.
- "**Swap**" shall mean any swap, hedge or similar arrangement or agreement that transfers, in whole or in part, the economic risk of ownership of Shares or Related Securities, regardless of whether any such transaction is to be settled in securities, in cash or otherwise.

Capitalized terms not defined in this Annex A shall have the meanings given to them in the body of this letter agreement.

**Exhibit 5.1**

Hogan Lovells US LLP
1735 Market Street, Floor 23
Philadelphia, PA 19103
T +1 267 675 4600
F +1 267 675 4601
www.hoganlovells.com

June 4, 2018

Board of Directors
OptiNose, Inc.
1020 Stony Hill Road, Suite 300
Yardley, Pennsylvania 19067

Ladies and Gentlemen:

We are acting as counsel to OptiNose, Inc., a Delaware corporation (the "**Company**"), in connection with its registration statement on Form S-1, as amended (the "**Registration Statement**"), filed with the Securities and Exchange Commission under the Securities Act of 1933, as amended (the "**Act**"), relating to the proposed public offering of up to 5,175,000 shares of common stock, par value $0.001 per share, of the Company (the "**Shares**"), of which 2,587,500 shares are to be sold by the Company (including up to 337,500 shares that may be issued by the Company upon the exercise of an option to purchase additional shares to be granted to the underwriters) (collectively, the "**Company Shares**") and 2,587,500 shares are to be sold by the selling stockholders (including up to 337,500 shares that may be sold by the selling stockholders upon the exercise of an option to purchase additional shares to be granted to the underwriters) (collectively, the "**Stockholder Shares**"). This opinion letter is furnished to you at your request to enable you to fulfill the requirements of Item 601(b)(5) of Regulation S-K, 17 C.F.R. § 229.601(b)(5), in connection with the Registration Statement.

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

This opinion letter is based as to matters of law solely on the Delaware General Corporation Law, as amended. We express no opinion herein as to any other statutes, rules or regulations. As used herein, the term "Delaware General Corporation Law, as amended" includes the statutory provisions contained therein, all applicable provisions of the Delaware Constitution and reported judicial decisions interpreting these laws.

Based upon, subject to and limited by the foregoing, we are of the opinion that (a) following (i) execution and delivery by the Company and the selling stockholders of the Underwriting Agreement, (ii) effectiveness of the Registration Statement, (iii) issuance and sale of the Company Shares pursuant to the terms of the Underwriting Agreement, and (iv) receipt by the Company of the consideration for the Company Shares specified in the resolutions of the Board of Directors and the Pricing Committee of the Board of Directors, the Company Shares will be validly

Hogan Lovells US LLP is a limited liability partnership registered in the District of Columbia. "Hogan Lovells" is an international legal practice that includes Hogan Lovells US LLP and Hogan Lovells International LLP, with offices in: Alicante Amsterdam Baltimore Beijing Birmingham Boston Brussels Caracas Colorado Springs Denver Dubai Dusseldorf Frankfurt Hamburg Hanoi Ho Chi Minh City Hong Kong Houston Johannesburg London Los Angeles Luxembourg Madrid Mexico City Miami Milan Minneapolis Monterrey Moscow Munich New York Northern Virginia Paris Perth Philadelphia Rio de Janeiro Rome San Francisco São Paulo Shanghai Silicon Valley Singapore Sydney Tokyo Ulaanbaatar Warsaw Washington DC Associated offices: Budapest Jakarta Shanghai FTZ Zagreb. Business Service Centers: Johannesburg Louisville. For more information see www.hoganlovells.com

issued, fully paid and nonassessable and (b) the Stockholder Shares have been validly issued and are fully paid and non-assessable.

This opinion letter has been prepared for use in connection with the Registration Statement. We assume no obligation to advise of any changes in the foregoing subsequent to the effective date of the Registration Statement.

We hereby consent to the filing of this opinion letter as Exhibit 5.1 to the Registration Statement and to the reference to this firm under the caption "Legal Matters" in the prospectus constituting a part of the Registration Statement. In giving this consent, we do not thereby admit that we are an "expert" within the meaning of the Act.

Very truly yours,

/s/ HOGAN LOVELLS US LLP

HOGAN LOVELLS US LLP

**Exhibit 23.1**

## Consent of Independent Registered Public Accounting Firm

We consent to the reference to our firm under the caption "Experts" in the Registration Statement (Form S-1) and related Prospectus of OptiNose, Inc. for the registration of shares of its common stock and to the incorporation by reference therein of our report dated March 13, 2018, with respect to the consolidated financial statements of OptiNose, Inc., included in its Annual Report (Form 10-K) for the year ended December 31, 2017, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Philadelphia, Pennsylvania
June 4, 2018

**Exhibit 99.1**

**Consent of Director Nominee**

Pursuant to Rule 438 of Regulation C promulgated under the Securities Act of 1933, as amended (the **"Securities Act"**), in connection with the Registration Statement on Form S-l (the **"Registration Statement"**) of OptiNose, Inc. (the **"Company"**), the undersigned hereby consents to being named and described as a director nominee of the Company in the Registration Statement and any amendment or supplement to any prospectus included in such Registration Statement, any amendment to such Registration Statement or any subsequent Registration Statement filed pursuant to Rule 462(b) under the Securities Act and to the filing or attachment of this consent with such Registration Statement and any amendment or supplement thereto.

IN WITNESS WHEREOF, the undersigned has executed this consent as of the 4th day of June, 2018.

/s/ Robert P. O'Neil
Signature

Robert P. O'Neil
Print Name