As confidentially submitted to the Securities and Exchange Commission on March 30, 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

Verrica Pharmaceuticals Inc.

(Exact name of registrant as specified in its charter)

Delaware	**2834**	**46-3137900**
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification No.)

200 Garrett Street
Suite S
Charlottesville, Virginia 22902
(434) 980-8100

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Corporation Service Company
251 Little Falls Drive
Wilmington, Delaware 19808
(302) 636-5400

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

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New York, New York 10022
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Approximate date of commencement of proposed sale to the public:

As soon as practicable after this Registration Statement is declared effective.

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, 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.

Large accelerated filer	☐	**Accelerated filer**	☐
Non-accelerated filer (Do not check if a smaller reporting company)	☒	**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	Proposed Maximum Aggregate Offering Price(1)	Amount of Registration Fee(2)
Common Stock, $0.0001 par value per share	$	$

(1) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended. Includes the offering price of additional shares that the underwriters have the option to purchase.

(2) Calculated pursuant to Rule 457(o) based on an estimate of the proposed maximum aggregate offering price.

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 or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

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The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

Subject to Completion
Preliminary Prospectus dated , 2018

PROSPECTUS

Shares

Common Stock

This is Verrica Pharmaceuticals Inc.'s initial public offering. We are selling shares of our common stock.

We expect the public offering price to be between $ and $ per share. Currently, no public market exists for the shares. We intend to apply for listing of our common stock on The Nasdaq Global Market under the symbol " ."

We are an "emerging growth company" as defined under the federal securities laws and, as such, have elected to comply with certain reduced public company reporting requirements.

Investing in the common stock involves risks that are described in the "Risk Factors" section beginning on page 11 of this prospectus.

	Per Share	Total
Public offering price	$	$
Underwriting discount(1)	$	$
Proceeds, before expenses, to us	$	$

(1) We refer you to "Underwriting" beginning on page 141 for additional information regarding underwriting compensation.

The underwriters may also exercise their option to purchase up to an additional shares from us, at the public offering price, less the underwriting discount, for 30 days after the date of this prospectus.

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 shares will be ready for delivery on or about , 2018.

BofA Merrill Lynch **Jefferies** **Cowen**

The date of this prospectus is , 2018.

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Neither we nor the underwriters have authorized anyone to provide you with information other than that contained in this prospectus or any free writing prospectus prepared by or on behalf of us or to which we have referred you. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We and the underwriters are offering to sell, and seeking offers to buy, common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date on the front cover page of this prospectus, or other earlier date stated in this prospectus, regardless of the time of delivery of this prospectus or of any sale of our common stock.

For investors outside of the United States: no action is being taken in any jurisdiction outside the United States to permit a public offering of our common stock or possession or distribution of this prospectus in that jurisdiction. Persons who come into possession of this prospectus in jurisdictions outside the United States are required to inform themselves about and to observe any restrictions as to this offering and the distribution of this prospectus applicable to that jurisdiction.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus. This summary does not contain all of the information you should consider before investing in our common stock. You should read this entire prospectus carefully, especially the "Risk Factors" section beginning on page 11 and our financial statements and the related notes appearing at the end of this prospectus, before making an investment decision.

As used in this prospectus, unless the context otherwise requires, references to "we," "us," "our," "the company" and "Verrica Pharmaceuticals" refer to Verrica Pharmaceuticals Inc.

Overview

We are a clinical-stage medical dermatology company focused on identifying, developing and commercializing innovative pharmaceutical products for the treatment of skin diseases with significant unmet needs. Our lead product candidate, VP-102, is a proprietary drug-device combination of our novel topical solution of cantharidin, a widely recognized, naturally sourced agent to treat topical dermatological conditions, administered through our single-use precision applicator. We are initially developing VP-102 for the treatment of molluscum contagiosum, or molluscum, a highly contagious and primarily pediatric viral skin disease, and common warts. There are currently no products approved by the U.S. Food and Drug Administration, or FDA, nor is there an established standard of care for either of these diseases, resulting in significant undertreated populations in two of the largest unmet needs in dermatology. VP-102 has the potential to be the first FDA-approved product for molluscum and for its active pharmaceutical ingredient to be characterized as a new chemical entity, or NCE, with the regulatory exclusivity associated with that designation.

We have recently initiated two randomized, double-blind, multicenter, placebo-controlled Phase 3 clinical trials of VP-102 for the treatment of molluscum, CAMP-1 and CAMP-2, and expect to report top-line results from these trials in the first half of 2019. If the results from these trials are favorable, we plan to submit a new drug application, or NDA, to the FDA for the approval of VP-102 in 2019. CAMP-1 is being conducted under a special protocol assessment, or SPA, with the FDA. We are also enrolling patients in an open-label Phase 2 clinical trial of VP-102 for the treatment of common warts. We expect to report top-line results from this trial by the end of 2018. We retain exclusive, royalty-free rights to our product candidates across all indications.

Our management team has extensive pharmaceutical industry experience ranging from drug development through commercialization, having launched more than 50 products collectively. These products include dermatology products such as Lamisil, Elidel, Acticlate and Hemangeol, and products having multi-billion dollar peak annual sales such as Nexium, Seroquel, Crestor and Diovan. The members of our management team have held senior leadership positions at a number of pharmaceutical and biotechnology companies, including Novartis, Aqua Pharmaceuticals (acquired by Almirall), AstraZeneca and Pierre Fabre. We believe that the breadth of experience and successful track record of our management team, combined with our broad network of established relationships with leaders in the industry and medical community, provide us with unique insights into drug development and commercialization. Furthermore, we have been supported by a group of leading biotech investors, including PBM Capital, Perceptive and OrbiMed.

Our Product Candidates

VP-102 for the Treatment of Molluscum

We are initially developing VP-102 for the treatment of molluscum. Molluscum is a highly contagious common skin disease caused by a pox virus that produces multiple raised flesh-colored papules, or skin lesions.

Molluscum typically presents with 10 to 30 lesions, which, if left untreated, persist for an average of 13 months with some cases remaining unresolved for more than two years. The symptoms of molluscum tend to cause considerable anxiety, and parents frequently seek treatment due to its highly contagious nature and physical appearance.

Molluscum has a 5% to 11% prevalence rate in children and the greatest incidence in individuals aged one to 14 years old. Accordingly, we estimate this represents a total addressable U.S. market of over $1 billion. We believe that the molluscum prevalence rate in the European Union is at least as high as in the United States.

Compounded cantharidin has been used for many years by dermatologists to treat molluscum, but it has many limitations. Those limitations include that it is not FDA approved, could have highly variable purity, is not readily available and is often not produced in accordance with good manufacturing practices, or GMP. In addition, the formulation and administration of compounded cantharidin is not standardized and is poorly controlled. Other existing therapies, such as cryotherapy, curettage and laser surgery are also used, but are often painful and may lead to scarring. The potential for scarring and pain makes many of these treatments particularly unsuitable for children. As a result, a significant need exists for a clinically-proven and FDA-approved treatment for molluscum.

We have designed VP-102 with the following benefits to address the shortcomings associated with current treatments for molluscum:

- **Non-invasive and minimal to no pain upon application.** VP-102 is designed to result in little to no pain upon application and to cause the clearance of the molluscum lesions generally without scarring.

- **GMP-compliant product with improved stability and purity.** VP-102 will be manufactured in accordance with GMP standards using an active pharmaceutical ingredient, or API, that is greater than 99% pure. Furthermore, the API is packaged in a sealed glass ampule, which enhances product stability and improves consistency in product concentration since evaporation is minimized.

- **Potential to increase physician efficiency.** Our proprietary applicator in VP-102 enables more precise administration compared to traditional compounded cantharidin formulations, which are typically applied via the wooden stick part of a cotton-tipped swab. VP-102 also contains a visualization agent enabling practitioners to see which lesions have been treated.

- **Potential to be the first FDA-approved product for the treatment of molluscum.** In contrast to compounded cantharidin, VP-102, if approved, will be eligible for drug reimbursement.

We believe VP-102 has the potential to become the standard of care in the underserved and undertreated primarily pediatric indication of molluscum.

We have completed one Phase 2 clinical trial of our proprietary topical solution of cantharidin administered with the wooden stick part of a cotton-tipped swab, which is the method of application historically used with compounded cantharidin. We are conducting another Phase 2 clinical trial of our proprietary topical solution of cantharidin administered through our proprietary applicator, which we collectively refer to as VP-102, for the treatment of molluscum. In these trials, our proprietary topical solution of cantharidin has been observed to be well tolerated, with no severe adverse events or unexpected treatment related adverse events to date.

VP-102 for the Treatment of Common Warts

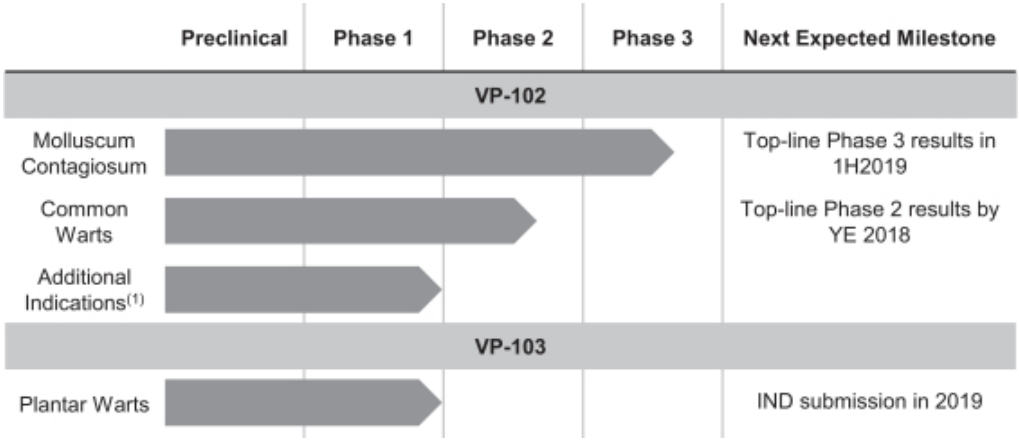
We are also developing VP-102 for the treatment of common warts. Approximately 2 million people seek treatment for common warts in the United States annually, and we estimate the total addressable U.S.

market to be approximately $1.5 billion. In the United States, approximately 50% of the patients who seek treatment for common warts are children, and approximately 25% of common warts patients are treated by pediatricians. We believe that the common wart patient opportunity in the European Union is at least as large as that in the United States. There are currently no FDA-approved drugs indicated for the treatment of common warts. While common warts can be treated with slow acting, over-the-counter products, the warts tend to be highly refractory and a cause for multiple consultations. We believe that cantharidin's role as a widely recognized and effective blistering agent for the treatment of skin lesions, coupled with VP-102's safety and efficacy data in clinical trials for the treatment of molluscum and convenient ease of administration, will allow VP-102 to address many of the shortcomings associated with current therapies. We are currently enrolling patients in a Phase 2 open-label trial of VP-102 for the treatment of common warts. We expect to report top-line results from this trial by the end of 2018.

VP-103 for the Treatment of Plantar Warts

We also intend to develop our second cantharidin-based product candidate, VP-103, for the treatment of plantar warts, which are warts located on the bottom of the foot. An estimated one-third of the approximately 4.1 million annual patient visits for all types of warts are for the treatment of plantar warts. We expect to conduct IND-enabling studies for VP-103 and to submit an investigational new drug application, or IND, to the FDA by the end of 2019. Pending final formulation and IND clearance, we expect that we will be able to substantially leverage our experience with VP-102 to initiate trials directly in target patients with plantar warts.

The following table summarizes our product candidates:



(1) Additional indications under consideration include subungual warts, flat warts, actinic keratosis, genital warts and seborrheic keratosis.

Our Strategy

Our strategy is to identify, develop and commercialize innovative medical dermatology solutions for the treatment of skin diseases with significant unmet needs. The key components of our strategy are to:

- **Complete the development and obtain FDA approval of VP-102 for the treatment of molluscum.** In the first quarter of 2018, we initiated two randomized, double-blinded, multicenter, placebo-controlled Phase 3 clinical trials of VP-102 for the treatment of molluscum, CAMP-1 and

CAMP-2. CAMP-1 is being conducted under an SPA with the FDA. We believe VP-102 has the potential to become the standard of care in the underserved and undertreated primarily pediatric indication of molluscum. If the results of our Phase 3 clinical trials are favorable, we intend to submit an NDA for VP-102 for the treatment of molluscum to the FDA in 2019.

- **Commercialize VP-102 through the establishment of a specialized sales organization.** We intend to commercialize VP-102, if approved, by building a specialized sales organization in the United States focused on pediatric dermatologists, dermatologists and select pediatricians. We believe a scientifically oriented, customer-focused team of approximately 50 to 60 sales representatives would allow us to reach the approximately 400 pediatric dermatologists and 9,000 dermatologists in the United States with the highest potential for using VP-102. In the future, we may seek to develop and commercialize VP-102 for additional geographic regions, independently or with a strategic partner.

- **Advance the development and obtain FDA approval of VP-102 for the treatment of common warts.** We are also developing VP-102 for the treatment of common warts and expect to report top-line results from our Phase 2 clinical trial of VP-102 for the treatment of common warts by the end of 2018. If the results of our Phase 2 clinical trial are favorable, we intend to initiate registration-enabling trials in 2019.

- **Pursue additional development activities for our cantharidin-based product candidates.** We are currently evaluating and prioritizing other potential indications for our proprietary topical solutions of cantharidin such as plantar warts, flat warts, actinic keratoses, genital warts, subungual warts, and seborrheic keratoses. Specifically, we intend to conduct IND-enabling studies and submit an IND to the FDA for our second product candidate, VP-103, for the treatment of plantar warts in 2019. Additionally, we are developing a process for production of fully-synthetic cantharidin.

- **Build a diversified multi-asset pipeline of novel therapies.** We intend to employ a value-driven strategy to identify, acquire, develop and commercialize product candidates for diseases that are treated by dermatologists. We intend to focus on product candidates that we believe have attractive profiles in early clinical testing and that can advance quickly and efficiently into late-stage development. As the dermatology landscape continues to evolve, we believe we can leverage the expertise and experience of our management team to be at the forefront of and capitalize on such opportunities.

Risks Associated with Our Business

Our ability to implement our business strategy is subject to numerous risks that you should be aware of before making an investment decision. These risks are described more fully in the section entitled “Risk Factors,” immediately following this prospectus summary. These risks include the following, among others:

- We have incurred significant losses since our inception. We expect to incur losses over the next several years and may never achieve or maintain profitability.

- Even if this offering is successful, we may need substantial additional funding to meet our financial obligations and to pursue our business objectives. If we are unable to raise capital when needed, we could be forced to curtail our planned operations and the pursuit of our growth strategy.

- We have a limited operating history and no history of commercializing products, which may make it difficult for you to evaluate the success of our business to date and to assess our future viability.

- We have only one product candidate, VP-102, for the treatment of molluscum and common warts, for which we are currently conducting clinical trials. If we are unable to successfully develop, receive regulatory approval for and commercialize VP-102 for the treatment of molluscum and/or common warts or any other indications, or successfully develop any other product candidates, or experience significant delays in doing so, our business will be harmed.

- We currently rely on a third party for our raw material in VP-102, and if we encounter any difficulties in procuring, or creating an alternative for, our raw material in VP-102 or any of our other product candidates we may develop, our business operations would be impaired.

- We face substantial competition, including from compounded cantharidin products that may compete with VP-102, which may result in a smaller than expected commercial opportunity and/or others discovering, developing or commercializing products before or more successfully than we do.

- The success of VP-102 for the treatment of molluscum and common warts will depend significantly on continued coverage and adequate reimbursement or the willingness of patients to pay for these procedures.

- The market for VP-102 and any other product candidates may not be as large as we expect.

- The patent applications that we have covering our product candidates are limited to specific formulations, preparations and devices, and methods of use and manufacturing processes, and our market opportunity for our product candidates may be limited by the lack of patent protection for the active ingredient itself and by competition from other formulations and manufacturing processes, as well as administration methods that may be developed by competitors.

- We expect to expand our development and regulatory capabilities and potentially implement sales, marketing and distribution capabilities, and as a result, we may encounter difficulties in managing our growth, which could disrupt our operations.

- Concentration of ownership of our common stock among our existing executive officers, directors and principal stockholders may prevent new investors from influencing significant corporate decisions.

Implications of Being an Emerging Growth Company

We qualify as an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. An emerging growth company may take advantage of relief from certain reporting requirements and other burdens that are otherwise applicable generally to public companies. These provisions include:

- reduced obligations with respect to financial data, including presenting only two years of audited financial statements and only two years of selected financial data in this prospectus;

- an exception from compliance with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended, or the Sarbanes-Oxley Act;

- reduced disclosure about our executive compensation arrangements in our periodic reports, proxy statements and registration statements; and

- exemptions from the requirements of holding non-binding advisory votes on executive compensation or golden parachute arrangements.

We may take advantage of these provisions for up to five years or until such earlier time that we no longer qualify as an emerging growth company. We will remain an emerging growth company until the earlier of (1) the last day of the fiscal year (a) following the fifth anniversary of the closing of this offering, (b) in which we have more than $1.07 billion in annual gross revenues or (c) we are deemed to be a "large accelerated filer" under the rules of the U.S. Securities and Exchange Commission, or SEC, which means the market value of our common stock that is held by non-affiliates exceeds $700 million as of the prior June 30th, and (2) the date on which we have issued more than $1.0 billion of non-convertible debt during the prior three-year period. We may choose to take advantage of some but not all of these reduced reporting burdens. For example, we may take advantage of the exemption from auditor attestation on the effectiveness of our internal control over financial reporting. To the extent that we take advantage of these reduced reporting burdens, the information that we provide stockholders may be different than you might obtain from other public companies in which you hold equity interests.

In addition, under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards and, therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

Our Corporate Information

We were incorporated under the laws of the State of Delaware on July 3, 2013. Our principal executive offices are located at and our telephone number is . Our website address is www.verrica.com. The information contained on, or accessible through, our website is not incorporated by reference into this prospectus, and you should not consider any information contained in, or that can be accessed through, our website as part of this prospectus or in deciding whether to purchase our common stock.

We own various U.S. federal trademark applications and unregistered trademarks, including our company name. All other trademarks or trade names referred to in this prospectus are the property of their respective owners. Solely for convenience, the trademarks and trade names in this prospectus are referred to without the symbols ® and ™, but such references should not be construed as any indicator that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto.

THE OFFERING

Common stock offered by us	shares
Common stock to be outstanding after this offering	shares
Option to purchase additional shares	The underwriters have a 30-day option to purchase a maximum of additional shares of common stock from us at the public offering price, less underwriting discounts and commissions on the same terms as set forth in this prospectus.
Use of proceeds	We estimate that the net proceeds from the sale of the shares of common stock in this offering will be approximately $ million, or approximately $ million if the underwriters exercise their option to purchase additional shares in full, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. We intend to use the net proceeds from this offering, together with our existing cash, to complete our planned clinical trials, seek regulatory approval and fund the commercialization of VP-102 for the treatment of molluscum, to advance the clinical development of VP-102 for the treatment of common warts, as well as for working capital and other general corporate purposes, including to develop VP-103 and VP-102 for additional indications and to pursue our strategy to develop, in-license or acquire additional product candidates. See "Use of Proceeds" beginning on page 62.
Risk factors	See "Risk Factors" beginning on page 11 and the other information included in this prospectus for a discussion of factors you should consider carefully before deciding to invest in our common stock.
Proposed Nasdaq Global Market symbol	

The number of shares of our common stock to be outstanding after this offering is based on 34,188,221 shares of our common stock as of March 15, 2018, after giving effect to the conversion of shares of our convertible preferred stock outstanding as of March 15, 2018 into an aggregate of 27,847,223 shares of our common stock immediately prior to the closing of this offering, and excludes:

- 1,981,476 shares of our common stock issuable upon the exercise of stock options outstanding under our 2013 equity incentive plan as of March 15, 2018, at a weighted average exercise price of $ per share; and
- shares of our common stock reserved for future issuance under our 2018 equity incentive plan, which will become effective upon the pricing of this offering, as well as any automatic increases in the number of shares of common stock reserved for future issuance under this plan.

Unless otherwise indicated, this prospectus reflects and assumes the following:

- the automatic conversion of all outstanding shares of our preferred stock on a one-for-one basis into 27,847,223 shares of our common stock, which will occur immediately prior to the closing of this offering;
- a -for-one reverse stock split of our common stock effected on , 2018;
- the filing and effectiveness of our amended and restated certificate of incorporation upon the closing of this offering;
- no exercise of the outstanding options described above; and
- no exercise by the underwriters of their option to purchase additional shares of our common stock.

SUMMARY FINANCIAL DATA

You should read the following summary financial data together with our financial statements and the related notes thereto included elsewhere in this prospectus and the "Selected Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" sections of this prospectus. We have derived the statement of operations data for the years ended December 31, 2016 and 2017 and the balance sheet data as of December 31, 2017 from our audited financial statements appearing at the end of this prospectus. Our historical results are not necessarily indicative of the results that should be expected in the future.

	Year Ended December 31,	
	2016	2017
	(in thousands, except share and per share data)	
Statement of Operations Data:		
Operating expenses:		
Research and development	$ 1,709	$ 3,730
General and administrative	204	727
Total operating expenses	1,913	4,457
Loss from operations	(1,913)	(4,457)
Other expense	—	(2)
Net loss	(1,913)	(4,459)
Deemed dividend on Series A preferred stock	—	(5,300)
Net loss attributable to common stockholders	$ (1,913)	$ (9,759)
Net loss per common share, basic and diluted	$ (0.30)	$ (0.70)
Net loss per share attributable to common stockholders, basic and diluted	$ (0.30)	$ (1.54)
Weighted average common shares outstanding, basic and diluted	6,316,235	6,340,357
Pro forma net loss per share, basic and diluted	$ (0.07)	$ (0.15)
Pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited)(1)		$ (0.33)
Pro forma weighted average common shares outstanding, basic and diluted (unaudited)(1)		29,581,313

(1) See note 2 to our financial statements included elsewhere in this prospectus for an explanation of the method used to calculate the pro forma based and diluted net loss per common share.

The following table presents our summary balance sheet data as of December 31, 2017:

- on an actual basis;
- on a pro forma basis to give effect to:
  - our sale of an aggregate of 4,606,267 shares of Series C convertible preferred stock in February and March 2018 at a purchase price of $4.559 per share for aggregate net proceeds of $21.0 million;

- the conversion of all outstanding shares of our convertible preferred stock, including the shares of Series C convertible preferred stock issued in February and March 2018, into an aggregate of 27,847,223 shares of our common stock, which will occur immediately prior to the closing of this offering; and

- on a pro forma as adjusted basis to give further effect to our sale of shares of common stock in this offering at an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

	As of December 31, 2017		
	Actual	Pro Forma	Pro Forma As Adjusted
	(in thousands)		
Balance Sheet Data:			
Cash	$ 8,663		
Working capital (1)	8,467		
Total assets	9,083		
Convertible preferred stock	15,508		
Total stockholders' (deficit) equity	(7,041)		

(1) We define working capital as current assets less current liabilities. See our financial statements included elsewhere in this prospectus for further details regarding our current assets and current liabilities.

Each $1.00 increase or decrease in the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase or decrease the pro forma as adjusted amount of each of cash, working capital, total assets and total stockholders' (deficit) equity by $ 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. Each increase or decrease of 1.0 million in the number of shares we are offering would increase or decrease the pro forma as adjusted amount of each of cash, working capital, total assets and total stockholders' (deficit) equity by $ million, assuming no change in the assumed initial public offering price per share and after deducting the estimated underwriting discounts and commissions. This pro forma as adjusted information is illustrative only and will depend on the actual initial public offering price and other terms of this offering determined at pricing.

RISK FACTORS

Investing in our common stock involves a high degree of risk. Before you invest in our common stock, you should carefully consider the following risks, as well as general economic and business risks, and all of the other information contained in this prospectus. Any of the following risks could have a material adverse effect on our business, operating results and financial condition and cause the trading price of our common stock to decline, which would cause you to lose all or part of your investment. When determining whether to invest, you should also refer to the other information contained in this prospectus, including our financial statements and the related notes thereto.

Risks Related to Our Financial Position and Capital Needs

We have incurred significant losses since our inception. We expect to incur losses over the next several years and may never achieve or maintain profitability.

We are a clinical-stage medical dermatology company with limited operating history. Since inception, we have incurred significant net losses. We incurred net losses of $1.9 million and $4.5 million for the years ended December 31, 2016 and 2017, respectively. As of December 31, 2017, we had an accumulated deficit of $12.4 million. Since inception, we have financed our operations with $36.9 million in gross proceeds raised in private placements of convertible debt and convertible preferred stock. We have no products approved for commercialization and have never generated any revenue.

We have devoted substantially all of our financial resources and efforts to the development of our novel topical solution of cantharidin and our lead product candidate, VP-102, for the treatment of molluscum, including preclinical studies and clinical trials. We have completed one Phase 2 clinical trial in molluscum with our proprietary cantharidin formulation, which we use in VP-102, and we have one ongoing Phase 2 clinical trial and have initiated two Phase 3 clinical trials for VP-102 for the treatment of molluscum. In addition to developing VP-102 for the treatment of molluscum, we are also developing VP-102 as a treatment for common warts and we are enrolling patients in a Phase 2 clinical trial for this indication. We also intend to develop our second cantharidin-based product candidate, VP-103, for the treatment of plantar warts. Therefore, we expect to continue to incur significant expenses and operating losses over the next several years. Our net losses may fluctuate significantly from quarter to quarter and year to year. We anticipate that our expenses will increase substantially as we:

- continue our ongoing clinical trials evaluating VP-102 for the treatment of molluscum and common warts as well as initiate and complete additional clinical trials, as needed;
- pursue regulatory approvals for VP-102 for the treatment of molluscum, and eventually for the treatment of common warts or any other indications we may pursue for VP-102, as well as for VP-103;
- seek to discover and develop additional product candidates;
- ultimately establish a commercialization infrastructure and scale up external manufacturing and distribution capabilities to commercialize any product candidates for which we may obtain regulatory approval, including VP-102 and VP-103;
- seek to in-license or acquire additional product candidates for other dermatological conditions;
- adapt our regulatory compliance efforts to incorporate requirements applicable to marketed products;
- maintain, expand and protect our intellectual property portfolio;

- hire additional clinical, manufacturing and scientific personnel;
- add operational, financial and management information systems and personnel, including personnel to support our product development and planned future commercialization efforts; and
- incur additional legal, accounting and other expenses in operating as a public company.

To become and remain profitable, we must succeed in developing and eventually commercializing product candidates that generate significant revenue. This will require us to be successful in a range of challenging activities, including completing preclinical testing and clinical trials of our product candidates, obtaining regulatory approval, and manufacturing, marketing and selling any product candidates for which we may obtain regulatory approval, as well as discovering and developing additional product candidates. We are only in the preliminary stages of most of these activities. We may never succeed in these activities and, even if we do, may never generate revenue that is significant enough to achieve profitability.

In cases where we are successful in obtaining regulatory approval to market one or more of our product candidates, our revenue will be dependent, in part, upon the size of the markets in the territories for which we gain regulatory approval, the accepted price for the product, the ability to obtain coverage and reimbursement, and whether we own the commercial rights for that territory. If the number of our addressable patients is not as significant as we estimate, the indication approved by regulatory authorities is narrower than we expect, or the treatment population is narrowed by competition, physician choice or treatment guidelines, we may not generate significant revenue from sales of such products, even if approved.

Because of the numerous risks and uncertainties associated with product development, we are unable to accurately predict the timing or amount of expenses or when, or if, we will be able to achieve profitability. If we are required by regulatory authorities to perform studies in addition to those expected, or if there are any delays in the initiation and completion of our clinical trials or the development of any of our product candidates, our expenses could increase.

Even if we achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain profitable would depress the value of our company and could impair our ability to raise capital, expand our business, maintain our development efforts, obtain product approvals, diversify our offerings or continue our operations. A decline in the value of our company could also cause you to lose all or part of your investment.

Even if this offering is successful, we may need substantial additional funding to meet our financial obligations and to pursue our business objectives. If we are unable to raise capital when needed, we could be forced to curtail our planned operations and the pursuit of our growth strategy.

Identifying potential product candidates and conducting preclinical testing and clinical trials is a time-consuming, expensive and uncertain process that takes years to complete, and we may never generate the necessary data or results required to obtain regulatory approval and achieve product sales. We expect to continue to incur significant expenses and operating losses over the next several years as we complete our Phase 2 clinical trial of VP-102 for the treatment of molluscum, continue enrolling patients in and complete our Phase 3 clinical trials of VP-102 for the treatment of molluscum, seek marketing approval for VP-102 for the treatment of molluscum, pursue clinical trials and marketing approval for VP-102 for the treatment of common warts and other indications, pursue clinical trials and marketing approval for VP-103 for the treatment of plantar warts and advance any of our other product candidates we may develop or otherwise acquire. In addition, our product candidates, if approved, may not achieve commercial success. Our revenue, if any, will be derived from sales of products that we do not expect to be commercially available for a number of years, if at all. If we obtain marketing approval for VP-102 for the treatment of molluscum or common warts or any other product candidates that we develop, we expect to incur significant commercialization expenses related to product sales, marketing,

distribution and manufacturing. We also expect an increase in our expenses associated with creating additional infrastructure to support operations as a public company.

As of December 31, 2017, we had cash of $8.7 million. Subsequent to December 31, 2017, we received gross proceeds of approximately $21.0 million from our sale of 4,606,267 shares of Series C convertible preferred stock in the first quarter of 2018. We believe that the anticipated net proceeds from this offering, together with our existing cash, will enable us to fund our operating expenses and capital expenditure requirements for at least . This estimate is based on assumptions that may prove to be wrong, and we could use our available capital resources sooner than we expect. Changes may occur beyond our control that would cause us to consume our available capital before that time, including changes in and progress of our development activities, acquisitions of additional product candidates, and changes in regulation. Our future capital requirements will depend on many factors, including:

- the progress and results of our ongoing Phase 2 clinical trial and recently initiated two Phase 3 clinical trials of VP-102 for the treatment of molluscum;
- the progress and results of our Phase 2 clinical trial and any other additional clinical trials evaluating VP-102 as a potential treatment for common warts;
- the scope, progress, results and costs of preclinical development, laboratory testing and clinical trials for VP-103 and any other indications of VP-102 we may decide to pursue;
- the extent to which we develop, in-license or acquire other product candidates and technologies;
- the number and development requirements of other product candidates that we may pursue;
- the costs, timing and outcome of regulatory review of our product candidates;
- the costs and timing of future commercialization activities, including product manufacturing, marketing, sales and distribution, for any of our product candidates for which we receive marketing approval;
- the revenue, if any, received from commercial sales of our product candidates for which we receive marketing approval;
- our ability to establish collaborations to commercialize VP-102 or any of our other product candidates outside the United States; and
- the costs and timing of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending any intellectual property-related claims.

We may require additional capital to commercialize VP-102 for the treatment of molluscum and/or common warts. If we receive regulatory approval for VP-102 for either indication, we expect to incur significant commercialization expenses related to product manufacturing, sales, marketing and distribution, depending on where we choose to commercialize. Additional funds may not be available on a timely basis, on favorable terms, or at all, and such funds, if raised, may not be sufficient to enable us to continue to implement our long-term business strategy. If we are unable to raise sufficient additional capital, we could be forced to curtail our planned operations and the pursuit of our growth strategy.

Raising additional capital may cause dilution to our stockholders, including purchasers of common stock in this offering, restrict our operations or require us to relinquish rights to our technologies or product candidates.

Until such time, if ever, as we can generate substantial revenue, we may finance our cash needs through a combination of equity offerings, debt financings and license and collaboration agreements. We do not currently have any committed external source of funds. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a common stockholder. Debt financing and preferred equity financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends.

If we raise additional funds through collaborations, strategic alliances or marketing, distribution or licensing arrangements with third parties, we may be required to relinquish valuable rights to our technologies, future revenue streams or product candidates or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

We have a limited operating history and no history of commercializing products, which may make it difficult for you to evaluate the success of our business to date and to assess our future viability.

We commenced operations in 2013, and our operations to date have been largely focused on raising capital and developing our novel topical solution of cantharidin and our lead product candidate, VP-102, for the treatment of molluscum and common warts, including undertaking preclinical studies and conducting clinical trials. VP-102 is our only product candidate for which we have conducted clinical trials. To date, we have completed one Phase 2 clinical trial for the treatment of molluscum using our proprietary cantharidin formula, which we use in VP-102, have one ongoing Phase 2 clinical trial using VP-102 for the treatment of molluscum, have initiated two Phase 3 clinical trials using VP-102 for the treatment of molluscum, and are enrolling patients in a Phase 2 clinical trial using VP-102 for the treatment of common warts. We have not yet demonstrated our ability to successfully complete later-stage clinical trials, obtain regulatory approvals, manufacture a product on a commercial scale, or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful commercialization. Consequently, any predictions you make about our future success or viability may not be as accurate as they could be if we had a longer operating history or a history of successfully developing and commercializing products.

We may encounter unforeseen expenses, difficulties, complications, delays and other known or unknown factors in achieving our business objectives. We will need to transition at some point from a company with a development focus to a company capable of supporting commercial activities. We may not be successful in such a transition.

Risks Related to the Development of Our Product Candidates

We have only one product candidate, VP-102, for the treatment of molluscum and common warts, for which we are currently conducting clinical trials. If we are unable to successfully develop, receive regulatory approval for and commercialize VP-102 for the treatment of molluscum and/or common warts or any other indications, or successfully develop any other product candidates, or experience significant delays in doing so, our business will be harmed.

We currently have no products that are approved for commercial sale. We have only one product candidate, VP-102, for which we have conducted clinical trials. To date, we have completed one Phase 2 clinical

trial for the treatment of molluscum using our proprietary cantharidin formula, which we use in VP-102, have one ongoing Phase 2 clinical trial using VP-102 for the treatment of molluscum, have initiated two Phase 3 clinical trials using VP-102 for the treatment of molluscum, and are enrolling patients in a Phase 2 clinical trial using VP-102 for the treatment of common warts. We also intend to develop our second product candidate, VP-103, for the treatment of plantar warts, but we have not conducted any clinical trials for VP-103. We have not completed the development of any product candidates and we may never be able to develop marketable products. We have invested substantially all of our efforts and financial resources in the development of our cantharidin formula and VP-102 for the treatment of molluscum and common warts. Our ability to generate revenue from our product candidates, which we do not expect will occur for a number of years, if ever, will depend heavily on their successful development, regulatory approval and eventual commercialization of these product candidates. The success of VP-102, VP-103 or any other product candidates that we develop or otherwise may acquire will depend on several factors, including:

- timely and successful completion of preclinical studies and our clinical trials;
- successful development of, or making arrangements with third-party manufacturers for, our commercial manufacturing processes for any of our product candidates that receive regulatory approval;
- receipt of timely marketing approvals from applicable regulatory authorities;
- launching commercial sales of products, if approved;
- acceptance of our products, if approved, by patients, the medical community and third-party payors, for their approved indications;
- our success in educating physicians and patients about the benefits, administration and use of VP-102 or any other product candidates, if approved;
- the prevalence and severity of adverse events experienced with VP-102 or our other product candidates;
- the availability, perceived advantages, cost, safety and efficacy of alternative treatments for molluscum and/or common warts or any other indications for which we may pursue for VP-102 or any other product candidates;
- our ability to produce VP-102 or any other product candidates on a commercial scale;
- obtaining and maintaining patent, trademark and trade secret protection and regulatory exclusivity for our product candidates and otherwise protecting our rights in our intellectual property portfolio;
- maintaining compliance with regulatory requirements, including current good manufacturing practices, or cGMPs;
- competing effectively with other procedures; and
- maintaining a continued acceptable safety, tolerability and efficacy profile of the products following approval.

Whether regulatory approval will be granted is unpredictable and depends upon numerous factors, including the substantial discretion of the regulatory authorities. Our product candidates' success in clinical trials is not guaranteed, and even if clinical trials are successful, it will not guarantee regulatory approval. Following

submission of our NDA for VP-102 for the treatment of molluscum or common warts or any other product candidate, the NDA may not be accepted for substantive review, or even if it is accepted for substantive review, the FDA or other comparable foreign regulatory authorities may require that we conduct additional studies or clinical trials, provide additional data, take additional manufacturing steps, or require other conditions before they will reconsider or approve our application. If the FDA or other comparable foreign regulatory authorities require additional studies, clinical trials or data, we would incur increased costs and delays in the marketing approval process, which may require us to expend more resources than we have available. In addition, the FDA or other comparable foreign regulatory authorities may not consider sufficient any additional required studies, clinical trials, data or information that we perform and complete or generate, or we may decide to abandon the program.

It is possible that VP-102 or any of our other product candidates we may develop or otherwise acquire will never obtain regulatory approval, even if we expend substantial time and resources seeking such approval. If we do not achieve one or more of these factors in a timely manner or at all, we could experience significant delays or an inability to successfully commercialize our product candidates, which would harm our business.

If the FDA does not conclude that VP-102 satisfies the requirements for the Section 505(b)(2) regulatory approval pathway, or if the requirements under Section 505(b)(2) are not as we expect, the approval pathway for VP-102 may take significantly longer, cost significantly more and entail significantly greater complications and risks than anticipated, and in either case, may not be successful.

We may seek FDA approval through the Section 505(b)(2) regulatory pathway for VP-102 and may pursue that pathway for potential future product candidates. The Drug Price Competition and Patent Term Restoration Act of 1984, also known as the Hatch-Waxman Amendments, added Section 505(b)(2) to the Federal Food, Drug, and Cosmetic Act, or the FDCA. Section 505(b)(2) permits the filing of an NDA where at least some of the information required for approval comes from studies not conducted by or for the applicant and for which the applicant has not obtained a right of reference. We may seek to rely on published literature in support of the safety and effectiveness of VP-102.

If we seek, and if the FDA does not allow us to pursue, the Section 505(b)(2) regulatory pathway as anticipated, we may need to conduct additional clinical trials, provide additional data and information and meet additional standards for regulatory approval. If this were to occur, the time and financial resources required to obtain FDA approval for our product candidates, and complications and risks associated with the development of our product candidates, would likely substantially increase. We may need to obtain additional funding, which could result in significant dilution to the ownership interests of our then existing stockholders to the extent we issue equity securities or convertible debt. We cannot assure you that we would be able to obtain such additional financing on terms acceptable to us, if at all. Moreover, inability to pursue the Section 505(b)(2) regulatory pathway could result in competitive products reaching the market before our product candidates, which could impact our competitive position and prospects. Even if we are allowed to pursue the Section 505(b)(2) regulatory pathway, we cannot assure you that our product candidates will receive the requisite approvals for commercialization, or that a competitor would not obtain approval first along with subsequent market exclusivity from the FDA, thereby delaying potential approval of our product.

In addition, notwithstanding the approval of a number of products by the FDA under Section 505(b)(2), some pharmaceutical companies and others have objected to the FDA's interpretation of Section 505(b)(2). If the FDA's interpretation of Section 505(b)(2) is successfully challenged, the FDA may be required to change its Section 505(b)(2) policies and practices, which could delay or even prevent the FDA from approving any NDA that we may submit under Section 505(b)(2).

Clinical product development involves a lengthy and expensive process, with an uncertain outcome. We may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of our product candidates.

The risk of failure for product candidates is high. It is impossible to predict when or if any of our product candidates will prove effective or safe in humans or will receive regulatory approval. Before obtaining marketing approval from regulatory authorities for the sale of any product candidate, we must complete preclinical development and then conduct extensive clinical trials to demonstrate the safety and efficacy of our product candidates in humans. Clinical testing is expensive, difficult to design and implement, can take many years to complete and is inherently uncertain as to outcome. A failure of one or more clinical trials can occur at any stage of testing or at any time during the trial process. The outcome of preclinical testing and early clinical trials may not be predictive of the results of later clinical trials, and interim results of a clinical trial do not necessarily predict final results. Moreover, preclinical and clinical data are often susceptible to varying interpretations and analyses, and many companies that have believed their product candidates performed satisfactorily in preclinical studies and clinical trials have nonetheless failed to obtain marketing approval of their products.

We have not completed all clinical trials required for the approval of any of our product candidates. Based on the feedback from our meeting with the FDA in September 2017, we recently initiated two Phase 3 clinical trials of VP-102 for the treatment of molluscum, one of which is being conducted under an SPA with the FDA. We are also enrolling patients in a Phase 2 clinical trial of VP-102 for the treatment of common warts. We cannot assure you that any clinical trial that we are conducting, or may conduct in the future, will demonstrate consistent or adequate efficacy and safety to obtain regulatory approval to market our product candidates.

We may experience delays in ongoing clinical trials for our product candidates, and we do not know whether future clinical trials, if any, will begin on time, need to be redesigned, enroll an adequate number of patients on time or be completed on schedule, if at all. We may experience numerous unforeseen events during or as a result of clinical trials that could delay or prevent our ability to receive marketing approval or commercialize our product candidates, including:

- regulators or institutional review boards may not authorize us or our investigators to commence a clinical trial or conduct a clinical trial at a prospective trial site;
- we may experience delays in reaching, or fail to reach, agreement on acceptable clinical trial contracts or clinical trial protocols with prospective trial sites or prospective contract research organizations, or CROs, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- clinical trials of our product candidates may produce negative or inconclusive results, including failure to demonstrate statistical significance, and we may decide, or regulators may require us, to conduct additional clinical trials or abandon product development programs;
- the number of patients required for clinical trials of our product candidates may be larger than we anticipate, enrollment in these clinical trials may be slower than we anticipate or participants may drop out of these clinical trials or fail to return for post-treatment follow-up at a higher rate than we anticipate;
- our product candidates may have undesirable side effects or other unexpected characteristics, causing us or our investigators, regulators or institutional review boards to suspend or terminate the trials;
- our third-party contractors may fail to comply with regulatory requirements or meet their contractual obligations to us in a timely manner, or at all;

- regulators or institutional review boards may require that we or our investigators suspend or terminate clinical development for various reasons, including noncompliance with regulatory requirements or a finding that the participants are being exposed to unacceptable health risks;

- the cost of clinical trials of our product candidates may be greater than we anticipate; and

- the supply or quality of our product candidates or other materials necessary to conduct clinical trials of our product candidates may be insufficient or inadequate.

We could also encounter delays if a clinical trial is suspended or terminated by us, by the institutional review boards of the institutions in which such trials are being conducted, by the data safety monitoring board for such trial or by the FDA or other regulatory authorities. Such authorities may impose such a suspension or termination due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the FDA or other regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a product, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial. If we experience delays in the completion of, or termination of, any clinical trial of our product candidates, the commercial prospects of our product candidates will be harmed, and our ability to generate product revenues from any of these product candidates will be delayed. In addition, any delays in completing our clinical trials will increase our costs, slow down our product candidate development and approval process and jeopardize our ability to commence product sales and generate revenues. Any of these occurrences may harm our business, financial condition and prospects significantly. In addition, many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our product candidates. If we are required to conduct additional clinical trials or other testing of our product candidates beyond those that we currently contemplate, if we are unable to successfully complete clinical trials of our product candidates or other testing, if the results of these trials or tests are not favorable or if there are safety concerns, we may:

- be delayed in obtaining marketing approval for our product candidates;

- not obtain marketing approval at all;

- obtain approval for indications or patient populations that are not as broad as intended or desired;

- obtain approval with labeling that includes significant use or distribution restrictions or safety warnings;

- be subject to additional post-marketing testing requirements; or

- have the product removed from the market after obtaining marketing approval.

Our product development costs will also increase if we experience delays in testing or marketing approvals. We do not know whether any of our preclinical studies or clinical trials will begin as planned, will need to be restructured or will be completed on schedule, or at all. Significant preclinical study or clinical trial delays also could shorten any periods during which we may have the exclusive right to commercialize our product candidates or allow our competitors to bring products to market before we do and impair our ability to successfully commercialize, or receive approval for, our product candidates. For example, if a competitor obtained FDA approval for a product containing cantharidin before we are able to obtain approval for our product, this could result in the approval of our product being delayed until the expiration of any NCE exclusivity or other regulatory exclusivity received by such competitor.

If we experience delays or difficulties in the enrollment and/or maintenance of patients in clinical trials, our receipt of necessary regulatory approvals could be delayed or prevented.

Successful and timely completion of clinical trials will require that we enroll a sufficient number of patients. Patient enrollment, a significant factor in the timing of clinical trials, is affected by many factors including the size and nature of the patient population. Trials may be subject to delays as a result of patient enrollment taking longer than anticipated or patient withdrawal. We may not be able to initiate or continue clinical trials for our product candidates if we are unable to locate and enroll a sufficient number of eligible patients to participate in these trials as required by the FDA or similar regulatory authorities outside the United States. We cannot predict how successful we will be at enrolling subjects in future clinical trials. Subject enrollment is affected by other factors including:

- the eligibility criteria for the trial in question;
- the perceived risks and benefits of the product candidate in the trial;
- the availability of products and other treatments to treat the skin disease in the trial;
- the willingness of patients to be enrolled in our clinical trials;
- the efforts to facilitate timely enrollment in clinical trials;
- the patient referral practices of physicians;
- the ability to monitor patients adequately during and after treatment; and
- the proximity and availability of clinical trial sites for prospective patients.

Our inability to enroll a sufficient number of patients for clinical trials would result in significant delays and could require us or them to abandon one or more clinical trials altogether. For example, parents may be reluctant to enroll their children in our clinical trials that have a relatively high risk of their child being assigned to placebo when in the alternative, they could decline participation, and receive compounded cantharidin outside of the clinical trial, if available, or pursue other alternative therapies. Enrollment delays in these clinical trials may result in increased development costs for our product candidates, which would cause the value of our company to decline and limit our ability to obtain additional financing. Furthermore, we rely on and expect to continue to rely on CROs and clinical trial sites to ensure the proper and timely conduct of our clinical trials and we will have limited influence over their performance.

Furthermore, even if we are able to enroll a sufficient number of patients for our clinical trials, we may have difficulty maintaining patients in our clinical trials. Many of the parents of patients who end up receiving placebo may perceive that their children enrolled in the trial are not receiving VP-102, and they may decide to withdraw their children from our clinical trials to pursue other alternative therapies rather than continue the trial with the perception that their children are receiving placebo.

Success in preclinical studies or earlier clinical trials may not be indicative of results in future clinical trial results.

Success in preclinical testing and early clinical trials does not ensure that later clinical trials will generate the same results or otherwise provide adequate data to demonstrate the efficacy and safety of a product candidate. Preclinical tests and Phase 1 and Phase 2 clinical trials are primarily designed to test safety, to study pharmacokinetics and pharmacodynamics and to understand the side effects of product candidates at various doses and schedules. Success in preclinical or animal studies and early clinical trials does not ensure that later

large scale efficacy trials will be successful nor does it predict final results. Our product candidates may fail to show the desired safety and efficacy in clinical development despite positive results in preclinical studies or having successfully advanced through initial clinical trials.

In addition, the design of a clinical trial can determine whether its results will support approval of a product and flaws in the design of a clinical trial may not become apparent until the clinical trial is well advanced. As an organization, we have limited experience designing clinical trials and may be unable to design and execute a clinical trial to support regulatory approval. Many companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in late-stage clinical trials even after achieving promising results in preclinical testing and earlier-stage clinical trials. Data obtained from preclinical and clinical activities are subject to varying interpretations, which may delay, limit or prevent regulatory approval. In addition, we may experience regulatory delays or rejections as a result of many factors, including changes in regulatory policy during the period of our product candidate development. Any such delays could negatively impact our business, financial condition, results of operations and prospects.

Interim "top-line" and preliminary results from our clinical trials that we announce or publish from time to time may change as more patient data become available and are subject to audit and verification procedures that could result in material changes in the final data.

From time to time, we may publish interim top-line or preliminary results from our clinical trials. Interim results from clinical trials that we may complete are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more patient data become available. Preliminary or top-line results also remain subject to audit and verification procedures that may result in the final data being materially different from the preliminary data we previously published. As a result, interim and preliminary data should be viewed with caution until the final data are available. Differences between preliminary or interim data and final data could significantly harm our business prospects and may cause the trading price of our common stock to fluctuate significantly.

Our clinical trials may fail to demonstrate the safety and efficacy of our product candidates, or serious adverse or unacceptable side effects may be identified during the development of our product candidates, which could prevent or delay regulatory approval and commercialization, increase our costs or necessitate the abandonment or limitation of the development of some of our product candidates.

Before obtaining regulatory approvals for the commercial sale of our product candidates, we must demonstrate through lengthy, complex and expensive preclinical testing and clinical trials that our product candidates are both safe and effective for use in each target indication, and failures can occur at any stage of testing. Clinical trials often fail to demonstrate safety and efficacy of the product candidate studied for the target indication.

If our product candidates are associated with side effects in clinical trials or have characteristics that are unexpected, we may need to abandon their development or limit development to more narrow uses in which the side effects or other characteristics are less prevalent, less severe or more acceptable from a risk-benefit perspective. The FDA or an institutional review board may also require that we suspend, discontinue, or limit our clinical trials based on safety information, or that we conduct additional animal or human studies regarding the safety and efficacy of our product candidates which we have not planned or anticipated. Such findings could further result in regulatory authorities failing to provide marketing authorization for our product candidates or limiting the scope of the approved indication, if approved. Many product candidates that initially showed promise in early stage testing have later been found to cause side effects that prevented further development of the product candidate.

Additionally, if one or more of our product candidates receives marketing approval, and we or others identify undesirable side effects caused by such products, a number of potentially significant negative consequences could result, including:

- regulatory authorities may withdraw approvals of such product;
- regulatory authorities may require additional warnings on the labels;
- we may be required to create a medication guide outlining the risks of such side effects for distribution to patients;
- we could be sued and held liable for harm caused to patients; and
- our reputation and physician or patient acceptance of our products may suffer.

There can be no assurance that we will resolve any issues related to any product-related adverse events to the satisfaction of the FDA or any regulatory agency in a timely manner or at all. Moreover, any of these events could prevent us from achieving or maintaining market acceptance of the particular product candidate, if approved, and could significantly harm our business, results of operations and prospects.

While we have negotiated an SPA agreement with the FDA relating to one of our Phase 3 clinical trials for VP-102, this agreement does not guarantee approval of VP-102 or any other particular outcome with respect to regulatory review of the study or the product candidate.

We recently initiated two Phase 3 clinical trials of VP-102 for the treatment of molluscum, one of which is being conducted under an SPA with the FDA. The FDA's SPA process is designed to facilitate the FDA's review and approval of drugs by allowing the FDA to evaluate the proposed design and size of Phase 3 clinical trials that are intended to form the primary basis for determining a drug product's efficacy. Upon specific request by a clinical trial sponsor, the FDA will evaluate the protocol and respond to a sponsor's questions regarding, among other things, primary efficacy endpoints, trial conduct and data analysis, within 45 days of receipt of the request. The FDA ultimately assesses whether the protocol design and planned analysis of the trial are acceptable to support regulatory submission for the product candidate with respect to the indication studied. All agreements and disagreements between the FDA and the sponsor regarding an SPA must be clearly documented in an SPA letter or the minutes of a meeting between the sponsor and the FDA.

However, an SPA agreement does not guarantee approval of a product candidate, and even if the FDA agrees to the design, execution, and analysis proposed in protocols reviewed under the SPA process, the FDA may revoke or alter its agreement in certain circumstances. In particular, an SPA agreement is not binding on the FDA if public health concerns emerge that were unrecognized at the time of the SPA agreement, other new scientific concerns regarding product safety or efficacy arise, the sponsor fails to comply with the agreed upon trial protocols, or the relevant data, assumptions or information provided by the sponsor in a request for the SPA change or are found to be false or omit relevant facts. After an SPA agreement is finalized, the SPA agreement may be modified, and such modification will be deemed binding on the FDA review division, except under the circumstances described above, if the FDA and the sponsor agree in writing to modify the protocol and such modification is intended to improve the study. The FDA retains significant latitude and discretion in interpreting the terms of the SPA agreement and the data and results from any study that is the subject of the SPA agreement.

We cannot assure you that our planned Phase 3 clinical trial under the SPA will succeed, will be deemed acceptable to the FDA under our SPA agreement, or will result in any FDA approval for VP-102. If the FDA revokes or alters its agreement under the SPA, believes that the manner in which the study was conducted was not consistent with the terms of our SPA, or interprets the data collected from the clinical trial differently than we do, the FDA may not deem the data sufficient to support an application for marketing approval, which could materially adversely affect our business, financial condition and results of operations.

VP-102 is a drug-device combination involving a proprietary applicator, which may result in additional regulatory and other risks.

VP-102 is a drug-device combination for administration of our cantharidin formulation through our proprietary applicator. We may experience delays in obtaining regulatory approval of VP-102 given the increased complexity of the review process when approval of a drug and a delivery device is sought under a single marketing application. VP-102 will be regulated as a drug-device combination product, which requires coordination within the FDA and similar foreign regulatory agencies for review of the product candidate's device and drug components. The determination whether a combination product requires a single marketing application or two separate marketing applications for each component is made by the FDA on a case-by-case basis. Although a single marketing application may be sufficient for the approval of a combination product, the FDA may determine that separate marketing applications are necessary. This determination could significantly increase the resources and time required to bring a particular combination product to market. Although the FDA and similar foreign regulatory agencies have systems in place for the review and approval of combination products such as ours, we may experience delays in the development and commercialization of our product candidate due to regulatory timing constraints and uncertainties in the product development and approval process, as well as coordination between two different centers within FDA responsible for review of the different components of the combination product.

Failure to successfully develop or supply the device, delays in or failure of the studies conducted by us, our collaborators, or third-party providers, or failure of our Company, our collaborators, or third-party providers to obtain or maintain regulatory approval or clearance of the device component of VP-102 could result in increased development costs, delays in or failure to obtain regulatory approval, and associated delays in VP-102 reaching the market. Further, failure to successfully develop or supply the device, or to gain or maintain its approval, could adversely affect sales of VP-102.

Changes in methods of product candidate manufacturing or formulation may result in additional costs or delay.

As product candidates proceed through preclinical studies to late-stage clinical trials towards potential approval and commercialization, it is common that various aspects of the development program, such as manufacturing methods and formulation, are altered along the way in an effort to optimize processes and results. Such changes carry the risk that they will not achieve these intended objectives. Any of these changes could cause our product candidates to perform differently and affect the results of planned clinical trials or other future clinical trials conducted with the altered materials. Such changes may also require additional testing, FDA notification or FDA approval. This could delay completion of clinical trials, require the conduct of bridging clinical trials or the repetition of one or more clinical trials, increase clinical trial costs, delay approval of our product candidates and jeopardize our ability to commence sales and generate revenue.

We may not be successful in our efforts to increase our pipeline of product candidates, including by pursuing additional indications for our current product candidate or in-licensing or acquiring additional product candidates for other dermatological conditions.

A key element of our strategy is to build and expand our pipeline of product candidates, including by developing VP-102 for the treatment of other dermatological conditions and VP-103 for the treatment of plantar warts. In addition, we intend to in-license or acquire additional product candidates for other dermatological conditions to build a fully integrated dermatology company. We may not be able to identify or develop product candidates that are safe, tolerable and effective. Even if we are successful in continuing to build our pipeline, the potential product candidates that we identify, in-license or acquire may not be suitable for clinical development, including as a result of being shown to have harmful side effects or other characteristics that indicate that they are unlikely to be products that will receive marketing approval and achieve market acceptance.

We may expend our limited resources to pursue a particular product candidate or indication and fail to capitalize on product candidates or indications that may be more profitable or for which there is a greater likelihood of success.

Because we have limited financial and management resources, we focus on development programs and product candidates that we identify for specific indications. As such, we are currently primarily focused on the development of VP-102 for the treatment of molluscum and common warts. As a result, we may forego or delay pursuit of opportunities with other product candidates or for other indications for VP-102 that later prove to have greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. Our spending on current and future development programs and product candidates for specific indications may not yield any commercially viable products. If we do not accurately evaluate the commercial potential or target market for a particular product candidate, we may relinquish valuable rights to that product candidate through collaboration, licensing or other royalty arrangements in cases in which it would have been more advantageous for us to retain sole development and commercialization rights to such product candidate.

The regulatory approval processes of the FDA and comparable foreign authorities are lengthy, time consuming and inherently unpredictable. If we are not able to obtain required regulatory approval for our product candidate, our business will be substantially harmed.

The time required to obtain approval or other marketing authorizations by the FDA and comparable foreign authorities is unpredictable but typically takes many years following the commencement of clinical trials and depends upon numerous factors, including the substantial discretion of the regulatory authorities. In addition, approval policies, regulations, or the type and amount of clinical data necessary to gain approval may change during the course of a product candidate's clinical development and may vary among jurisdictions. VP-102 is currently our only product candidate. We have not obtained regulatory approval for VP-102 or any product candidate and it is possible that neither VP-102 nor any product candidates we may seek to develop in the future will ever obtain regulatory approval. Neither we nor any future collaborator is permitted to market VP-102 or any future drug product candidates in the United States until we receive regulatory approval of an NDA from the FDA. To date, we have not met or discussed with the European Medicines Agency or any other comparable foreign authority regarding regulatory approval for VP-102 or any other product candidate outside of the United States.

Prior to obtaining approval to commercialize VP-102 and any other drug product candidate in the United States or abroad, we must demonstrate with substantial evidence from well-controlled clinical trials, and to the satisfaction of the FDA or foreign regulatory agencies, that such product candidates are safe and effective for their intended uses. Results from nonclinical studies and clinical trials can be interpreted in different ways. Even if we believe the nonclinical or clinical data for our product candidates are promising, such data may not be sufficient to support approval by the FDA and other regulatory authorities. The FDA may also require us to conduct additional nonclinical studies or clinical trials for our product candidates either prior to or after approval, or it may object to elements of our clinical development program.

Of the large number of products in development, only a small percentage successfully complete the FDA or foreign regulatory approval processes and are commercialized. The lengthy approval or marketing authorization process as well as the unpredictability of future clinical trial results may result in our failing to obtain regulatory approval or marketing authorization to market our product candidates, which would significantly harm our business, financial condition, results of operations and prospects.

We have invested a significant portion of our time and financial resources in the development of VP-102. Our business is dependent on our ability to successfully complete preclinical and clinical development of, obtain regulatory approval for, and, if approved, successfully commercialize VP-102 and any future product candidates in a timely manner.

Even if we eventually complete clinical testing and receive approval of an NDA or foreign marketing application for VP-102 or any future product candidates, the FDA or the applicable foreign regulatory agency may grant approval or other marketing authorization contingent on the performance of costly additional clinical trials, including post-market clinical trials. The FDA or the applicable foreign regulatory agency also may approve or authorize for marketing a product candidate for a more limited indication or patient population that we originally request, and the FDA or applicable foreign regulatory agency may not approve or authorize the labeling that we believe is necessary or desirable for the successful commercialization of a product candidate. Any delay in obtaining, or inability to obtain, applicable regulatory approval or other marketing authorization would delay or prevent commercialization of that product candidate and would materially adversely impact our business and prospects.

In addition, the FDA and other regulatory authorities may change their policies, issue additional regulations or revise existing regulations, or take other actions, which may prevent or delay approval of our future products under development on a timely basis. Such policy or regulatory changes could impose additional requirements upon us that could delay our ability to obtain approvals, increase the costs of compliance or restrict our ability to maintain any marketing authorizations we may have obtained.

Furthermore, even if we obtain regulatory approval for VP-102 and any future product candidates, we will still need to develop a commercial organization, establish a commercially viable pricing structure and obtain approval for adequate reimbursement from third-party and government payors. If we are unable to successfully commercialize VP-102 and any future product candidates, we may not be able to generate sufficient revenue to continue our business.

Risks Related to the Commercialization of Our Product Candidates

Even if any of our product candidates receives marketing approval, it may fail to achieve the degree of market acceptance by physicians, patients, third-party payors and others in the medical community necessary for commercial success.

If any of our product candidates receives marketing approval, it may nonetheless fail to gain sufficient market acceptance by physicians, patients, third-party payors and others in the medical community. If our product candidates do not achieve an adequate level of acceptance, we may not generate significant revenue and we may not become profitable. The degree of market acceptance of our product candidates, if approved for commercial sale, will depend on a number of factors, including:

- the efficacy, safety and potential advantages compared to alternative treatments, including for VP-102, compared to compounded cantharidin;
- our ability to offer our products for sale at competitive prices;
- the convenience and ease of administration compared to alternative treatments, including compounded cantharidin;
- the willingness of the target patient population to try new treatments and of physicians to prescribe these treatments;
- our ability to hire and retain a sales force in the United States;
- the strength of marketing and distribution support;
- the availability of third-party coverage and adequate reimbursement for VP-102 and any other potential product candidates;

- the prevalence and severity of any side effects; and
- any restrictions on the use of our products together with other medications.

In the case of VP-102, the failure of healthcare professionals or patients to perceive the benefits of using VP-102 instead of compounded cantharidin or other alternative therapies, such as curettage or cryotherapy, would adversely affect the commercial success of VP-102, if approved.

If we are unable to establish sales, marketing and distribution capabilities for VP-102 or any other product candidate that may receive regulatory approval, we may not be successful in commercializing those product candidates if and when they are approved.

We do not have sales or marketing infrastructure. To achieve commercial success for VP-102 and any other product candidate for which we may obtain marketing approval, we will need to establish a sales and marketing organization. In the future, we expect to build a focused sales and marketing infrastructure to market or co-promote some of our product candidates in the United States, if and when they are approved. There are risks involved with establishing our own sales, marketing and distribution capabilities. For example, recruiting and training a sales force is expensive and time consuming and could delay any product launch. If the commercial launch of a product candidate for which we recruit a sales force and establish marketing capabilities is delayed or does not occur for any reason, we would have prematurely or unnecessarily incurred these commercialization expenses. This may be costly, and our investment would be lost if we cannot retain or reposition our sales and marketing personnel.

Factors that may inhibit our efforts to commercialize our products on our own include:

- our inability to recruit, train and retain adequate numbers of effective sales and marketing personnel;
- the inability of sales personnel to obtain access to physicians or persuade adequate numbers of physicians to prescribe any future products;
- the lack of complementary products to be offered by sales personnel, which may put us at a competitive disadvantage relative to companies with more extensive product lines; and
- unforeseen costs and expenses associated with creating an independent sales and marketing organization.

If we are unable to establish our own sales, marketing and distribution capabilities and are forced to enter into arrangements with, and rely on, third parties to perform these services, our revenue and our profitability, if any, are likely to be lower than if we had developed such capabilities ourselves. In addition, we may not be successful in entering into arrangements with third parties to sell, market and distribute our product candidates or may be unable to do so on terms that are favorable to us. We likely will have little control over such third parties, and any of them may fail to devote the necessary resources and attention to sell and market our products effectively. If we do not establish sales, marketing and distribution capabilities successfully, either on our own or in collaboration with third parties, we will not be successful in commercializing our product candidates.

We face substantial competition, including from compounded cantharidin products that may compete with VP-102, which may result in a smaller than expected commercial opportunity and/or others discovering, developing or commercializing products before or more successfully than we do.

The development and commercialization of new products is highly competitive. We face competition with respect to our current product candidates, and will face competition with respect to any product candidates

that we may seek to develop or commercialize in the future, from many different sources, including major pharmaceutical and specialty pharmaceutical companies, compounding facilities, academic institutions and governmental agencies and public and private research institutions.

We are aware of several other product candidates in earlier stages of development as potential treatments for the indications we intend to target. Veloce Biopharma, Leo Pharma, and Novan have initiated clinical trials with different programs in molluscum. There are a number of companies conducting late-stage clinical trials for common warts, including Aclaris Therapeutics and Cutanea Life Sciences. In addition, other drugs have been and may continue to be used off label as treatment for molluscum and common warts, and there are other existing alternative therapies such as curettage or cryotherapy.

In addition, some of the market demand for cantharidin may be satisfied by compounding pharmacies and registered outsourcing facilities regulated under Sections 503A and 503B of the FDCA. If we receive approval for VP-102, any compounding by licensed pharmacists or licensed physicians under Section 503A would not be legally permitted to include, regularly or in inordinate amounts, the compounding of any drug that is essentially a copy of VP-102. The FDA has announced that it intends to consider a compounded drug product to be essentially a copy of a commercially available drug under Section 503A if it has the same API, has the same, similar, or an easily substitutable dosage strength, and can be used by the same route of administration. However, a compounded product would not be considered essentially a copy of VP-102, and could be compounded under Section 503A, if there were a difference between the compounded product and VP-102 that was made for an individual patient, and which the prescribing practitioner determines produces a significant difference for that patient. Similarly, any compounding by outsourcing facilities under Section 503B would not be legally permitted to include the compounding of a drug that is essentially a copy of VP-102, if approved, where the compounded drug would be considered essentially a copy if it were identical or nearly identical to VP-102 (which the FDA has interpreted to mean that it has the same active ingredient(s), route of administration, dosage form, dosage strength and excipients as the approved drug), or if it contains the active ingredient in VP-102 (cantharidin), unless there is a change from the approved drug that produces a clinical difference for an individual patient as determined by the prescribing practitioner.

Compounding pharmacies and registered outsourcing facilities may therefore be permitted to compound cantharidin drug products, even if we receive approval for VP-102, if a prescribing practitioner determines that a compounded product prescribed for a specific patient features a change from VP-102 that produces a significant difference for the patient (under Section 503A), or if a prescribing practitioner determines that a compounded cantharidin product features a change from VP-102 that produces a clinical difference for the patient (under Section 503B). Physicians may determine that such differences exist for some or all of their patients, and may choose to prescribe compounded cantharidin products for such patients. Moreover, under Section 503B, outsourcing facilities are not limited to compounding in response to prescriptions for identified, individual patients, and could compound using bulk cantharidin provided cantharidin appears on a list established by the FDA of bulk drug substances for which there is a clinical need, or satisfies certain other limited conditions. Although the FDA has not yet established a list of bulk drug substances for which there is a clinical need, the FDA has announced an interim policy pursuant to which bulk drug substances may be nominated for inclusion on such list and, provided certain conditions are met, outsourcing facilities may compound with such bulk drug substances pending evaluation of the substances for inclusion on the FDA's list of bulk drug substances for which there is a clinical need. Cantharidin is currently listed among those nominated substances for which bulk drug substance may be used in compounding by outsourcing facilities pending FDA's evaluation.

In March 2018, the FDA released a draft Guidance for Industry addressing the criteria by which the FDA intends to evaluate whether there exists a clinical need for compounding with a bulk drug substance, including, in the case of a bulk drug substance that is a component of an FDA-approved drug, an evaluation of whether there exists an attribute of the approved drug that makes it medically unsuitable to treat certain patients; whether the drug product proposed to be compounded is intended to address that attribute; and whether the drug product proposed to be compounded must be compounded from a bulk drug substance rather than from the

finished, FDA-approved drug product. If the FDA implements these criteria as proposed in the draft Guidance for Industry, and if VP-102 is approved, an outsourcing facility may be permitted to compound a cantharidin product using bulk cantharidin notwithstanding our approval provided it satisfies these and other criteria set forth in the FDA's draft guidance.

In addition, the FDA may, in its enforcement discretion, not prioritize enforcement of the restrictions under Sections 503A and 503B on compounding drugs that are essentially copies of VP-102, if approved, in which case compounded drug product that is essentially a copy of VP-102 could be made available to physicians and their patients. In the event compounders are authorized to continue to compound cantharadin products following approval of VP-102, if approved, we could be subject to significant competition.

In addition, our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have fewer or less severe side effects, are more convenient or are less expensive than VP-102 or any other product that we may develop. Our competitors also may obtain FDA or other regulatory approval for their products more rapidly than we may obtain approval for our product, which could result in our competitors establishing a strong market position before we are able to enter the market or, if a competitor obtained FDA approval for a product containing cantharidin before we are able to obtain approval for our product, could result in the approval of our product being delayed until the expiration of any NCE exclusivity or other regulatory exclusivity received by such competitor.

Many of the companies against which we are competing, or against which we may compete in the future, have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing approved products than we do. Mergers and acquisitions in the pharmaceutical and biotechnology industries may result in even more resources being concentrated among a smaller number of our competitors. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel and establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or that may be necessary for, our programs.

We intend to seek NCE exclusivity and/or pediatric exclusivity for VP-102 and future product candidates, and we may be unsuccessful.

As part of our business strategy, we intend to seek NCE exclusivity for VP-102 or future product candidates. In the United States, a pharmaceutical manufacturer may obtain five years of non-patent exclusivity upon NDA approval of an NCE which is a drug that contains an active moiety that has not been approved by the FDA in any other NDA. An "active moiety" is defined as the molecule or ion responsible for the drug substance's physiological or pharmacologic action. During the five-year exclusivity period, the FDA cannot accept for filing any ANDA seeking approval of a generic version of that drug or any 505(b)(2) NDA for the same active moiety and that relies on the FDA's findings regarding that drug, except that FDA may accept an application for filing after four years if the follow-on applicant makes a paragraph IV certification. This exclusivity period may be extended by an additional six months if certain requirements are met to qualify the product for pediatric exclusivity, including the receipt of a written request from the FDA that we conduct certain pediatric studies, the submission of study reports from such studies to the FDA after receipt of the written request and satisfaction of the conditions specified in the written request. We believe that cantharidin constitutes an NCE, such that VP-102 should, if approved, be eligible for NCE exclusivity and that our planned clinical trials will qualify VP-102 for pediatric exclusivity if a written request from the FDA is received. However, there can be no guarantee that we will successfully obtain such exclusivity, and if any of our competitors obtains FDA approval of an NDA for a cantharidin drug product before we do, they, and not us, may be eligible for NCE exclusivity. If we do not obtain NCE exclusivity for VP-102, or if a competitor obtains NCE exclusivity for a cantharidin product before we submit and receive approval of an NDA for VP-102, our ability to commence sales and generate revenue would be adversely affected.

Moreover, even if we obtain NCE exclusivity and/or pediatric exclusivity for VP-102, such exclusivity would not block the sale of compounded cantharidin products in those situations where compounding would be permitted under Sections 503A or 503B of the FDCA.

The success of VP-102 for the treatment of molluscum and common warts will depend significantly on coverage and adequate reimbursement or the willingness of patients to pay for these procedures.

We believe our success depends on continued coverage and adequate reimbursement for procedures using VP-102 for the treatment of molluscum and/or common warts or, in the absence of coverage and adequate reimbursement, on the extent to which patients will be willing to pay out of pocket for such procedures. Obtaining coverage and adequate reimbursement for our products may be particularly difficult because of the higher prices often associated with drugs administered under the supervision of a physician. Separate reimbursement for the product itself or the treatment or procedure in which our product is used may not be available. Even if the procedure using our product is covered, third-party payors may package the cost of the drug into the procedure payment and not separately reimburse the physician for the costs associated with our product. A decision by a third-party payor not to cover or separately reimburse for our products could reduce physician utilization of our products once approved. Additionally, in the United States, there is no uniform policy of coverage and reimbursement among third-party payors. Third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own coverage and reimbursement policies. However, decisions regarding the extent of coverage and amount of reimbursement to be provided is be made on a payor-by-payor basis. One payor's determination to provide coverage for a drug product does not assure that other payors will also provide coverage, and adequate reimbursement.

Third-party payors determine which medical procedures they will cover and establish reimbursement levels. Even if a third-party payor covers a particular procedure, the resulting reimbursement payment rates may not be adequate. Patients who are treated in-office for a medical condition generally rely on third-party payors to reimburse all or part of the costs associated with the procedure and may be unwilling to undergo such procedures for the treatment of molluscum and/or common warts in the absence of such coverage and adequate reimbursement. Physicians may be unlikely to offer procedures for such treatment if they are not covered by insurance and may be unlikely to purchase and use our product candidates, if approved, for molluscum and/or common warts unless coverage is provided and reimbursement is adequate.

Reimbursement by a third-party payor may depend upon a number of factors, including the third-party payor's determination that a procedure is safe, effective and medically necessary; appropriate for the specific patient; cost-effective; supported by peer-reviewed medical journals; included in clinical practice guidelines; and neither cosmetic, experimental, nor investigational.

Further, from time to time, typically on an annual basis, payment rates are updated and revised by third-party payors. Such updates could impact the demand for our product candidates, to the extent that patients who are prescribed our product candidates, if approved, are not separately reimbursed for the cost of the product candidates. An example of payment updates is the Medicare program updates to physician payments, which is done on an annual basis. In the past, when the application of the formula resulted in lower payment, Congress has passed interim legislation to prevent the reductions. The Medicare Access and CHIP Reauthorization Act of 2015, or MACRA, ended the use of the statutory formula and provided for a 0.5% annual increase in payment rates under the Medicare Physician Fee Schedule through 2019, but no annual update from 2020 through 2025. MACRA also introduced a merit based incentive bonus program for Medicare physicians beginning in 2019. At this time, it is unclear how the introduction of the merit based incentive program will impact overall physician reimbursement under the Medicare program. Any resulting decrease in payment under the merit based reimbursement system may adversely affect our revenue and results of operations. In addition, the Medicare physician fee schedule has been adapted by some private payors into their plan-specific physician payment schedule. We cannot predict how pending and future healthcare legislation will impact our business, and any changes in coverage and reimbursement that further restricts coverage of our product candidates or lowers reimbursement for procedures using our products could harm our business.

Foreign governments also have their own healthcare reimbursement systems, which vary significantly by country and region, and we cannot be sure that coverage and adequate reimbursement will be made available with respect to the treatments in which our products are used under any foreign reimbursement system.

There can be no assurance that VP-102 for the treatment of molluscum and/or common warts, if approved for sale in the United States or in other countries, will be considered medically reasonable and necessary, that they will be considered cost-effective by third-party payors, that coverage or an adequate level of reimbursement will be available, or that reimbursement policies and practices in the United States and in foreign countries where our products are sold will not adversely affect our ability to sell our product candidates profitably, if they are approved for sale.

The market for VP-102 and any other product candidates may not be as large as we expect.

Our lead indications for VP-102 are for molluscum and common warts, both of which are skin diseases that are currently undertreated with no standard of care. If VP-102 is approved for either indication, individuals may continue to decline treatment for molluscum and/or common warts as, if left untreated, these skin diseases will eventually be resolved by the body's immune system.

In addition, our estimates of the potential market opportunity for VP-102 and any other product candidates include several key assumptions based on our industry knowledge, industry publications, third-party research reports and surveys of dermatologists commissioned by us. These assumptions include the prevalence of molluscum, common warts and other skin diseases. However, there can be no assurance that any of these assumptions are, or will remain, accurate. Furthermore, even if our estimates relating to the prevalence of molluscum, common warts and other skin diseases are accurate, the degree of market acceptance by the medical community and those infected by such skin diseases following regulatory approval, if any, could impact our assumptions and reduce the market size for VP-102 in molluscum, common warts or any other indication. For example, if VP-102 is approved for either molluscum or common warts, there can be no assurance that the medical community will prescribe VP-102 for patients over current forms of available alternative therapies. If the actual market for VP-102 in molluscum, common warts or any other indication we may pursue for VP-102 or for any other product candidate we may develop is smaller than we expect, our revenues, if any, may be limited and it may be more difficult for us to achieve or maintain profitability.

Product liability lawsuits against us could cause us to incur substantial liabilities and to limit commercialization of any products that we may develop.

We face an inherent risk of product liability exposure related to the testing of our product candidates in human clinical trials and will face an even greater risk if we commercially sell any products that we may develop. If we cannot successfully defend ourselves against claims that our product candidates or drugs caused injuries, we will incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- decreased demand for any product candidates or drugs that we may develop;
- injury to our reputation and significant negative media attention;
- withdrawal of clinical trial participants;
- significant costs to defend the related litigation;
- substantial monetary awards paid to trial participants or patients;
- loss of revenue;

- reduced resources of our management to pursue our business strategy; and
- the inability to commercialize any products that we may develop.

We currently hold $20 million in product liability insurance coverage in the aggregate, with a per incident limit of $20 million, which may not be adequate to cover all liabilities that we may incur. We may need to increase our insurance coverage as we expand our clinical trials or if we commence commercialization of our product candidates. Insurance coverage is increasingly expensive. We may not be able to maintain insurance coverage at a reasonable cost or in an amount adequate to satisfy any liability that may arise.

Our business activities involve the use of hazardous materials, which require compliance with environmental and occupational safety laws regulating the use of such materials. If we or our vendors violate these laws, we could be subject to significant fines, liabilities or other adverse consequences.

Our business activities involve the controlled use of hazardous materials, including corrosive, explosive and flammable chemicals and other hazardous compounds in addition to certain biological hazardous waste. Ultimately, the activities of our third party product manufacturers when a product candidate reaches commercialization will also require the use of hazardous materials. Accordingly, we are subject to federal, state and local laws governing the use, handling and disposal of these materials. For example, cantharidin is classified as an extremely hazardous substance in the United States and is subject to strict reporting requirements. Furthermore, the excipients in our product candidate are combustible and flammable. If not handled properly, there is a risk of explosion which could carry liability risk and affect the availability or capacity of the affected vendor. Although we believe that our and our vendors' safety procedures for handling and disposing of these materials comply in all material respects with the standards prescribed by local, state and federal regulations, we cannot completely eliminate the risk of accidental contamination or injury from these materials. In addition, our collaborators may not comply with these laws. In the event of an accident or failure to comply with environmental laws, we could be held liable for damages that result, and any such liability could exceed our assets and resources or we could be subject to limitations or stoppages related to our use of these materials which may lead to an interruption of our business operations or those of our third party contractors. While we believe that our existing insurance coverage is generally adequate for our normal handling of these hazardous materials, it may not be sufficient to cover pollution conditions or other extraordinary or unanticipated events. Furthermore, an accident could damage or force us to shut down our operations or one of our vendors. Changes in environmental laws may impose costly compliance requirements on us or otherwise subject us to future liabilities and additional laws relating to the management, handling, generation, manufacture, transportation, storage, use and disposal of materials used in or generated by the manufacture of our products or related to our clinical trials. In addition, we cannot predict the effect that these potential requirements may have on us, our suppliers and contractors or our customers.

Our business and operations would suffer in the event of computer system failures, cyber-attacks or a deficiency in our cyber-security.

Despite the implementation of security measures, our internal computer systems, and those of third parties on which we rely, are vulnerable to damage from computer viruses, malware, natural disasters, terrorism, war, telecommunication and electrical failures, cyber-attacks or cyber-intrusions over the Internet, attachments to emails, persons inside our organization, or persons with access to systems inside our organization. The risk of a security breach or disruption, particularly through cyber-attacks or cyber intrusion, including by computer hackers, foreign governments, and cyber terrorists, has generally increased as the number, intensity and sophistication of attempted attacks and intrusions from around the world have increased. If such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our product development programs. For example, the loss of clinical trial data from completed or ongoing or planned clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach was to result in a loss of or damage to our

data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur material legal claims and liability, damage to our reputation, and the further development of our product candidates could be delayed.

Risks Related to Our Dependence on Third Parties

We will rely on third parties to conduct our future clinical trials for product candidates, and those third parties may not perform satisfactorily, including failing to meet deadlines for the completion of such trials.

We have engaged a CRO to conduct our Phase 2 and Phase 3 clinical trials of VP-102 for the treatment of molluscum, our Phase 2 clinical trial of VP-102 for the treatment of common warts, and expect to engage a CRO for future clinical trials for VP-102 or other product candidates that we may progress to clinical development. We expect to continue to rely on third parties, such as clinical data management organizations, medical institutions and clinical investigators, to conduct those clinical trials. If any of our relationships with these third parties terminate, we may not be able to timely enter into arrangements with alternative third parties or to do so on commercially reasonable terms, if at all. In addition, any third parties conducting our clinical trials will not be our employees, and except for remedies available to us under our agreements with such third parties, we cannot control whether or not they devote sufficient time and resources to our clinical programs. If these third parties do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols, regulatory requirements or for other reasons, our clinical trials may be extended, delayed or terminated and we may not be able to obtain regulatory approval for or successfully commercialize our product candidates. Consequently, our results of operations and the commercial prospects for our product candidates would be harmed, our costs could increase substantially and our ability to generate revenue could be delayed significantly.

Switching or adding CROs involves substantial cost and requires management time and focus. In addition, there is a natural transition period when a new CRO commences work. As a result, delays occur, which can materially impact our ability to meet our desired clinical development timelines. Though we intend to carefully manage our relationships with our CROs, there can be no assurance that we will not encounter challenges or delays in the future or that these delays or challenges will not have a material adverse impact on our business, financial condition and prospects.

We rely on these parties for execution of our preclinical studies and clinical trials, and generally do not control their activities. Our reliance on these third parties for research and development activities will reduce our control over these activities but will not relieve us of our responsibilities. For example, we will remain responsible for ensuring that each of our clinical trials is conducted in accordance with the general investigational plan and protocols for the trial. Moreover, the FDA requires us to comply with standards, commonly referred to as good clinical practices, or GCPs, for conducting, recording and reporting the results of clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of trial participants are protected. We also are required to register ongoing clinical trials and post the results of completed clinical trials on a government-sponsored database, ClinicalTrials.gov, within specified timeframes. Failure to do so can result in fines, adverse publicity and civil and criminal sanctions. If we or any of our CROs or other third parties, including trial sites, fails to comply with applicable GCPs, the clinical data generated in our clinical trials may be deemed unreliable and the FDA, EMA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. We cannot assure you that upon inspection by a given regulatory authority, such regulatory authority will determine that any of our clinical trials complies with GCP regulations. In addition, our clinical trials must be conducted with product produced under cGMP conditions. Our failure to comply with these regulations may require us to repeat clinical trials, which would delay the regulatory approval process.

In addition, principal investigators for our clinical trials may serve as scientific advisors or consultants to us from time to time and receive compensation in connection with such services. Under certain circumstances,

we may be required to report some of these relationships to the FDA. The FDA may conclude that a financial relationship between us and a principal investigator has created a conflict of interest or otherwise affected interpretation of the trial. The FDA may therefore question the integrity of the data generated at the applicable clinical trial site and the utility of the clinical trial itself may be jeopardized. This could result in a delay in approval, or rejection, of our marketing applications by the FDA and may ultimately lead to the denial of marketing approval of VP-102 and any other product candidates.

We also expect to rely on other third parties to store and distribute product supplies for our clinical trials. Any performance failure on the part of our distributors could delay clinical development or marketing approval of our product candidates or commercialization of our products, producing additional losses and depriving us of potential revenue.

We currently rely on a third party to supply our raw material used in VP-102, and if we encounter any difficulties in procuring, or creating an alternative for, our raw material in VP-102 or any of our other product candidates we may develop, our business operations would be impaired.

Currently, we rely on a supplier based in the People's Republic of China, or the PRC, to supply naturally-sourced cantharidin, which is the raw material of VP-102 and is obtained from blister beetles. We do not currently have contracts in place for redundant supply or additional sources for naturally-sourced cantharidin and there are no assurances we would be able to enter into a similar commercial arrangement with one. Accordingly, we are exposed to a number of environmental risks, including:

- risk of contamination being introduced in the beetle population through environmental factors that we cannot control, which would result in unexpected anomalies or new impurities in the cantharidin;
- loss of the beetle's habitat and other similar environmental risks to the beetle population whether due to climate change, over-development, or otherwise; and
- risk of disease in the beetles.

In addition, any business or economic challenges our supplier faces, whether in the ordinary course or not, could impair their ability to meet our cantharidin supply needs. Accordingly, there is a risk that supplies of our product may be significantly delayed by or may become unavailable as a result of any issues affecting that company's supply and production of naturally-sourced cantharidin.

Furthermore, our supplier's operations may be curtailed or delayed in the event the regulators in the PRC determine that our supplier is not acting in accordance with laws or under appropriate permits or licenses. We may also face additional supply chain risks due to the regulatory and political structure of the PRC, or as a result of the international relationship between the PRC and the United States or any of the other countries in which our products are marketed. For example, any deterioration in the trade relationship between the U.S. and China, which imposes any restrictions, tariffs or limitations on the export of cantharidin from China would impact our ability to meet our raw material needs. We are also exposed to foreign exchange risks, and fluctuations in exchange rates between the U.S. dollar and the Renminbi could negatively impact the commercial viability of importing cantharidin from the PRC.

While we are working to develop a process for manufacturing cantharidin synthetically, there is risk that we will be unable to do so or that we will be unable to produce a sufficient quantity of synthetically derived cantharidin to meet our needs and, even if we are ultimately able to produce synthetically derived cantharidin in quantities that are sufficient to meet our needs, we cannot predict when we will be able to do so. If we are unable to develop a process for manufacturing cantharidin synthetically and on a commercial scale, we will be forced to continue to rely on naturally sourced cantharidin.

Any difficulties we face in maintaining our supply of cantharidin, or limitations we face in increasing our supply to meet commercial needs for VP-102 or any of our other product candidates, whether such cantharidin is naturally sourced or synthetically derived, would impair our business operations.

We contract with third parties for the manufacture of VP-102 for preclinical and clinical testing and expect to continue to do so for commercialization. This reliance on third parties increases the risk that we will not have sufficient quantities of VP-102 or such quantities at an acceptable cost, which could delay, prevent or impair our development or commercialization efforts.

We do not have any manufacturing facilities or personnel. We currently rely, and expect to continue to rely, on third parties for the manufacture of VP-102, or any other product candidates which we may pursue, for preclinical and clinical testing as well as for commercial manufacture if VP-102 or any other product candidate which we may pursue receives marketing approval. This reliance on third parties increases the risk that we will not have sufficient quantities of VP-102 or be able to obtain quantities at an acceptable cost or quality, which could delay, prevent or impair our ability to timely conduct our clinical trials or our other development or commercialization efforts.

We also expect to rely on third-party manufacturers or third-party collaborators for the manufacture of commercial supply of VP-102 or any other product candidates for which we obtain marketing approval. The facilities used by our contract manufacturers to manufacture our product candidates must be approved by the FDA or other regulatory authorities pursuant to inspections that will be conducted after we submit our NDA or comparable marketing application to the FDA or other regulatory authority. We do not have control over a supplier's or manufacturer's compliance with laws, regulations and applicable cGMP standards and other laws and regulations, such as those related to environmental health and safety matters. If our contract manufacturers cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA or others, they will not be able to secure and maintain regulatory approval for their manufacturing facilities. In addition, we have no control over the ability of our contract manufacturers to maintain adequate quality control, quality assurance and qualified personnel. If the FDA or a comparable foreign regulatory authority does not approve these facilities for the manufacture of our product candidates or if it withdraws any such approval in the future, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain regulatory approval for or market our product candidates, if approved.

We may be unable to establish any agreements with future third-party manufacturers or to do so on acceptable terms. Even if we are able to establish agreements with third-party manufacturers, qualifying and validating such manufacturers may take a significant period of time and reliance on third-party manufacturers entails additional risks, including:

- reliance on the third party for regulatory compliance and quality assurance;
- the possible breach of the manufacturing agreement by the third party;
- the possible misappropriation of our proprietary information, including our trade secrets and know-how;
- the possible increase in costs for the raw materials or API in VP-102; and
- the possible termination or nonrenewal of any agreement by any third party at a time that is costly or inconvenient for us.

Third-party manufacturers may not be able to comply with cGMP regulations or similar regulatory requirements outside the United States. Our failure, or the failure of our third-party manufacturers, to comply

with applicable regulations could result in sanctions being imposed on us, including clinical holds, fines, injunctions, civil penalties, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of product candidates or drugs, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect supplies of our products.

Our product candidates and any drugs that we may develop may compete with other product candidates and drugs for access to manufacturing facilities. There are no assurances we would be able to enter into similar commercial arrangements with other manufacturers that operate under cGMP regulations and that might be capable of manufacturing for us. Any performance failure on the part of our existing or future manufacturers could delay clinical development or marketing approval.

To date, all manufacturing and assembly of our single-use precision applicator has been done using a manual process. In order to manufacture our applicator on a commercial scale, we will need to develop an automated process successfully and on a timely basis. If our current contract manufacturers cannot perform as agreed, we may be required to replace such manufacturers. We may incur added costs and delays in identifying and qualifying any such replacement. We expect to continue to depend on third-party contract manufacturers for the foreseeable future. Our current and anticipated future dependence upon others for the manufacture of our product candidates or drugs may adversely affect our future profit margins and our ability to commercialize any drugs that receive marketing approval on a timely and competitive basis. If there is any disruption in our supply chain, it could take a significant period of time to qualify and validate a replacement on terms acceptable to us, if we are able to at all.

We may seek collaborations with third parties for the development or commercialization of our product candidates. If those collaborations are not successful, we may not be able to capitalize on the market potential of these product candidates.

We may seek third-party collaborators for the development and commercialization of our product candidates, including for the commercialization of any of our product candidates that are approved for marketing outside the United States. Our likely collaborators for any collaboration arrangements include large and mid-size pharmaceutical companies, regional and national pharmaceutical companies and biotechnology companies. If we do enter into any such arrangements with any third parties, we will likely have limited control over the amount and timing of resources that our collaborators dedicate to the development or commercialization of our product candidates. Our ability to generate revenue from these arrangements will depend on our collaborators' abilities to successfully perform the functions assigned to them in these arrangements.

Collaborations involving our product candidates would pose the following risks to us:

- collaborators have significant discretion in determining the efforts and resources that they will apply to these collaborations;
- collaborators may not perform their obligations as expected;
- collaborators may not pursue development and commercialization of any product candidates that achieve regulatory approval or may elect not to continue or renew development or commercialization programs based on clinical trial results, changes in the collaborators' strategic focus or available funding, or external factors, such as an acquisition, that divert resources or create competing priorities;
- collaborators may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial or abandon a product candidate, repeat or conduct new clinical trials or require a new formulation of a product candidate for clinical testing;

- collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our product candidates if the collaborators believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ours;

- product candidates discovered in collaboration with us may be viewed by our collaborators as competitive with their own product candidates or drugs, which may cause collaborators to cease to devote resources to the commercialization of our product candidates;

- a collaborator with marketing and distribution rights to one or more of our product candidates that achieve regulatory approval may not commit sufficient resources to the marketing and distribution of such products;

- disagreements with collaborators, including disagreements over proprietary rights, contract interpretation or the preferred course of development, might cause delays or termination of the research, development or commercialization of product candidates, might lead to additional responsibilities for us with respect to product candidates, or might result in litigation or arbitration, any of which would be time-consuming and expensive;

- collaborators may not properly maintain or defend our or their intellectual property rights or may use our or their proprietary information in such a way as to invite litigation that could jeopardize or invalidate such intellectual property or proprietary information or expose us to potential litigation;

- collaborators may infringe the intellectual property rights of third parties, which may expose us to litigation and potential liability; and

- collaborations may be terminated for the convenience of the collaborator and, if terminated, we could be required to raise additional capital to pursue further development or commercialization of the applicable product candidates.

Collaboration agreements may not lead to development or commercialization of product candidates in the most efficient manner or at all. If a present or future collaborator of ours were to be involved in a business combination, the continued pursuit and emphasis on our product development or commercialization program could be delayed, diminished or terminated.

If we are not able to establish collaborations, we may have to alter our development and commercialization plans.

Our product development programs and the potential commercialization of our product candidates will require substantial additional capital. For some of our product candidates, we may decide to collaborate with pharmaceutical and biotechnology companies for the development and potential commercialization of those product candidates.

We face significant competition in seeking appropriate collaborators. Whether we reach a definitive agreement for a collaboration will depend, among other things, upon our assessment of the collaborator's resources and expertise, the terms and conditions of the proposed collaboration and the proposed collaborator's evaluation of a number of factors. Those factors may include the design or results of clinical trials, the likelihood of approval by the FDA or similar regulatory authorities outside the United States, the potential market for the subject product candidate, the costs and complexities of manufacturing and delivering such product candidate to patients, the potential of competing products, the existence of uncertainty with respect to our ownership of technology, which can exist if there is a challenge to such ownership without regard to the merits of the challenge and industry and market conditions generally. The collaborator may also consider alternative product candidates

or technologies for similar indications that may be available to collaborate on and whether such a collaboration could be more attractive than the one with us for our product candidate. Collaborations are complex and time- consuming to negotiate and document. In addition, there have been a significant number of recent business combinations among large pharmaceutical companies that have resulted in a reduced number of potential future collaborators.

We may not be able to negotiate collaborations on a timely basis, on acceptable terms, or at all. If we are unable to do so, we may have to curtail the development of such product candidate, reduce or delay its development program or one or more of our other development programs, delay its potential commercialization or reduce the scope of any sales or marketing activities, or increase our expenditures and undertake development or commercialization activities at our own expense. If we elect to increase our expenditures to fund development or commercialization activities on our own, we may need to obtain additional capital, which may not be available to us on acceptable terms or at all. If we do not have sufficient funds, we may not be able to further develop our product candidates or bring them to market and generate revenue.

Risks Related to Our Intellectual Property

If we are unable to obtain or protect intellectual property rights related to any of our product candidates, we may not be able to compete effectively in our market.

We plan to rely upon a combination of patents, trade secret protection, and confidentiality agreements to protect the intellectual property related to our product candidates. The issuance, scope, validity, enforceability, strength, and commercial value of patents in the pharmaceutical field involves complex legal and scientific questions and can be uncertain. We currently do not own any issued patents, and the patent applications that we own may fail to result in issued patents with claims that cover the product candidates in the United States or in foreign jurisdictions. If this were to occur, early generic competition could be expected against our product candidates in development. There may be relevant prior art relating to our future patents and patent applications which could invalidate a patent or prevent a patent from issuing based on a pending patent application. In particular, because the API in many of our product candidates has been available and used for many years, it is possible that these products have previously been used in such a manner that such prior usage would affect our ability to obtain patents based on our patent applications. Moreover, because numerous parties have developed and/or commercialized, or are developing, a wide variety of applicator devices for use with topical dermatological medications, it is possible that prior art related to applicator devices could affect our ability to obtain patent protection for our planned product applicator device or that disputes may arise related to whether third-party applicator devices infringe patents we have applied for.

The patent prosecution process is expensive and time-consuming. We may not be able to prepare, file, and prosecute all necessary or desirable patent applications for a commercially reasonable cost or in a timely manner or in all jurisdictions. It is also possible that we may fail to identify patentable aspects of inventions made in the course of development and commercialization activities before it is too late to obtain patent protection on them. Moreover, depending on the terms of any future in-licenses to which we may become a party, we may not have the right to control the preparation, filing, and prosecution of patent applications, or to maintain the patents, covering technology in-licensed from third parties. Therefore, these patents and patent applications may not be prosecuted and enforced in a manner consistent with the best interests of our business.

In addition to the protection we hope to receive from patents we have applied for, we rely on trade secret protection and confidentiality agreements to protect proprietary know-how that is not patentable, processes for which patents are difficult to enforce and any other elements of our drug development and reformulation processes that involve proprietary know-how, information, or technology that is not covered by patents. Although we generally require all of our employees to assign their inventions to us, and all of our employees, consultants, advisors, and any third parties who have access to our proprietary know-how, information, or technology to enter into confidentiality agreements, we cannot provide any assurances that all such agreements have been duly

executed, or that our trade secrets and other confidential proprietary information will not be disclosed. Moreover, our competitors may independently develop knowledge, methods and know-how equivalent to our trade secrets. Competitors could purchase our products and replicate some or all of the competitive advantages we derive from our development efforts for technologies on which we do not have patent protection. If any of our trade secrets were to be lawfully obtained or independently developed by a competitor, we would have no right to prevent them, or those to whom they communicate it, from using that technology or information to compete with us. If any of our trade secrets were to be disclosed to or independently developed by a competitor, our competitive position would be harmed.

We also seek to preserve the integrity and confidentiality of our data and trade secrets by maintaining physical security of our premises and physical and electronic security of our information technology systems. While we have confidence in these individuals, organizations and systems, agreements or security measures may be breached, and we may not have adequate remedies for any breach. Also, if the steps taken to maintain our trade secrets are deemed inadequate, we may have insufficient recourse against third parties for misappropriating the trade secret. In addition, others may independently discover our trade secrets and proprietary information. For example, the FDA is considering whether to make additional information publicly available on a routine basis, including information that we may consider to be trade secrets or other proprietary information, and it is not clear at the present time how the FDA's disclosure policies may change in the future. If we are unable to prevent material disclosure of the non-patented intellectual property related to our technologies to third parties, and there is no guarantee that we will have any such enforceable trade secret protection, we may not be able to establish or maintain a competitive advantage in our market, which could materially adversely affect our business, results of operations and financial condition.

We may enjoy only limited geographical protection with respect to certain patents and we may not be able to protect our intellectual property rights throughout the world.

Filing and prosecuting patent applications and defending patents covering our product candidates in all countries throughout the world would be prohibitively expensive. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where we have patent protection, but enforcement rights are not as strong as that in the United States or Europe. These products may compete with our product candidates, and our future patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

In addition, we may decide to abandon national and regional patent applications before grant. The examination of each national or regional patent application is an independent proceeding. As a result, patent applications in the same family may issue as patents in some jurisdictions, such as in the United States, but may issue as patents with claims of different scope or may even be refused in other jurisdictions. It is also quite common that depending on the country, the scope of patent protection may vary for the same product candidate or technology.

While we intend to protect our intellectual property rights in our expected significant markets, we cannot ensure that we will be able to initiate or maintain similar efforts in all jurisdictions in which we may wish to market our product candidates. Accordingly, our efforts to protect our intellectual property rights in such countries may be inadequate, which may have an adverse effect on our ability to successfully commercialize our product candidates in all of our expected significant foreign markets. If we encounter difficulties in protecting, or are otherwise precluded from effectively protecting, the intellectual property rights important for our business in such jurisdictions, the value of these rights may be diminished, and we may face additional competition from others in those jurisdictions.

The laws of some jurisdictions do not protect intellectual property rights to the same extent as the laws or rules and regulations in the United States and Europe, and many companies have encountered significant

difficulties in protecting and defending such rights in such jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets, and other intellectual property rights, which could make it difficult for us to stop the infringement of our future patents or marketing of competing products in violation of our proprietary rights generally. Proceedings to enforce our patent rights in other jurisdictions, whether or not successful, could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our future patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing as patents, and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

Some countries also have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In addition, some countries limit the enforceability of patents against government agencies or government contractors. In those countries, the patent owner may have limited remedies, which could materially diminish the value of such patents. If we are forced to grant a license to third parties with respect to any patents relevant to our business, our competitive position may be impaired.

Recent patent reform legislation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our future patents.

Our ability to obtain patents is highly uncertain because, to date, some legal principles remain unresolved, there has not been a consistent policy regarding the breadth or interpretation of claims allowed in patents in the United States and the specific content of patents and patent applications that are necessary to support and interpret patent claims is highly uncertain due to the complex nature of the relevant legal, scientific, and factual issues. Changes in either patent laws or interpretations of patent laws in the United States and other countries may diminish the value of our intellectual property or narrow the scope of our patent protection.

For example, on September 16, 2011, the Leahy-Smith America Invents Act, or the Leahy-Smith Act, was signed into law. The Leahy-Smith Act includes a number of significant changes to United States patent law. These include provisions that affect the way patent applications will be prosecuted and may also affect patent litigation. The United States Patent and Trademark Office, or USPTO, has developed new and untested regulations and procedures to govern the full implementation of the Leahy-Smith Act, and many of the substantive changes to patent law associated with the Leahy-Smith Act, and in particular, the first to file provisions, only became effective in March 2013. The Leahy-Smith Act has also introduced procedures making it easier for third parties to challenge issued patents, as well as to intervene in the prosecution of patent applications. Finally, the Leahy-Smith Act contains new statutory provisions that require the USPTO to issue new regulations for their implementation, and it may take the courts years to interpret the provisions of the new statute. It is too early to tell what, if any, impact the Leahy-Smith Act will have on the operation of our business and the protection and enforcement of our intellectual property. However, the Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our future patents. Further, the U.S. Supreme Court has ruled on several patent cases in recent years, either narrowing the scope of patent protection available in certain circumstances or weakening the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents, once obtained. Depending on actions by the U.S. Congress, the federal courts, and the USPTO, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce patents that we have owned or licensed or that we might obtain in the future. An inability to obtain, enforce, and defend patents covering our proprietary technologies would materially and adversely affect our business prospects and financial condition.

Similarly, changes in patent laws and regulations in other countries or jurisdictions or changes in the governmental bodies that enforce them or changes in how the relevant governmental authority enforces patent

laws or regulations may weaken our ability to obtain new patents or to enforce patents that we may obtain in the future. Further, the laws of some foreign countries do not protect proprietary rights to the same extent or in the same manner as the laws of the United States. As a result, we may encounter significant problems in protecting and defending our intellectual property both in the United States and abroad. For example, if the issuance to us, in a given country, of a patent covering an invention is not followed by the issuance, in other countries, of patents covering the same invention, or if any judicial interpretation of the validity, enforceability, or scope of the claims, or the written description or enablement, in a patent issued in one country is not similar to the interpretation given to the corresponding patent issued in another country, our ability to protect our intellectual property in those countries may be limited. Changes in either patent laws or in interpretations of patent laws in the United States and other countries may materially diminish the value of our intellectual property or narrow the scope of our patent protection.

Obtaining and maintaining our patent protection depends on compliance with various procedural, document submission, fee payment, and other requirements imposed by government patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

Periodic maintenance fees, renewal fees, annuity fees, and various other government fees on patents and/or applications will be due to be paid to the USPTO and various government patent agencies outside of the United States over the lifetime of our patents and/or applications and any patent rights we may obtain in the future. We rely on our outside counsel to pay these fees. The USPTO and various non-U.S. government patent agencies require compliance with several procedural, documentary, fee payment, and other similar provisions during the patent application process. We employ reputable law firms and other professionals to help us comply. In many cases, an inadvertent lapse can be cured by payment of a late fee or by other means in accordance with the applicable rules. There are situations, however, in which non-compliance can result in abandonment or lapse of the patents or patent applications, resulting in partial or complete loss of patent rights in the relevant jurisdiction. In such an event, potential competitors might be able to enter the market, and this circumstance could harm our business.

The patent applications that we have covering our product candidates are limited to specific formulations, preparations and devices, and methods of use and manufacturing processes, and our market opportunity for our product candidates may be limited by the lack of patent protection for the active ingredient itself and by competition from other formulations and manufacturing processes, as well as administration methods that may be developed by competitors.

Cantharidin is a naturally occurring compound found in many species of blister beetles, and has been used since ancient times for medicinal purposes. Therefore, the composition of matter for the chemical structure of cantharidin itself, which is the API used in our product candidates, is not eligible for patent protection. We seek to obtain patent protection for our manufacturing technology, drug administering technology and our product candidates, including specific formulations, preparations and devices, and methods of use and manufacturing processes. Although the protection afforded by our patent applications may be significant with respect to VP-102, when looking at the ability of the patents we have applied for to block competition, the protection offered by the patents we have applied for may be, to some extent, more limited than the protection provided by a patent claiming the composition of matter of an entirely new chemical structure previously unknown. As a result, generic products that do not infringe the claims of our future patents covering formulations, preparations, devices, methods of use, and manufacturing processes may be available while we are marketing our products. In general, method of use patents are more difficult to enforce than composition of matter patents because, for example, of the risks that the FDA may approve alternative uses of the subject compound not covered by method of use patents, and others may engage in off-label sale or use of the subject compound. Physicians are permitted to prescribe an approved product for uses that are not described in the product's labeling. Although off-label prescriptions may infringe the method of use patents we have applied for, the practice is common across medical specialties and such infringement is difficult to prevent or prosecute. In addition, competitors who obtain the requisite regulatory approval will be able to commercialize products with

the same active ingredient as our product candidates so long as the competitors do not infringe any process, use, formulation, preparation or device patents that we have applied for to protect our product candidates, subject to any regulatory exclusivity we may be able to obtain for our product candidates.

The number of patents and patent applications covering products containing the same active ingredient as our product candidates indicates that competitors have sought to develop and may seek to commercialize competing formulations that may not be covered by our patents and patent applications. The commercial opportunity for our product candidates could be significantly harmed if competitors are able to develop and commercialize alternative formulations of our product candidates that are different from ours and do not infringe our issued patents covering our product candidates, our device, or uses of our product candidates.

We may be involved in lawsuits to protect or enforce our patents, which could be expensive, time consuming and unsuccessful.

Competitors may infringe the patents we have applied for. To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time-consuming. If we initiate legal proceedings against a third party to enforce a patent covering one of our product candidates, the defendant could counterclaim that the patent covering our product or product candidate is invalid and/or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity and/or unenforceability are common, and there are numerous grounds upon which a third party can assert invalidity or unenforceability of a patent. In an infringement proceeding, a court may decide that a patent of ours is not valid or is unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology in question. Third parties may also raise similar claims before administrative bodies in the United States or abroad, even outside the context of litigation. Such mechanisms include re-examination, post grant review, *inter partes* review (IPR), and equivalent proceedings in foreign jurisdictions (e.g., opposition proceedings). Such proceedings could result in revocation of or amendment to our patents in such a way that they no longer cover our product candidates. The outcome following legal assertions of invalidity and unenforceability is unpredictable. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art, of which we, our patent counsel, and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity and/or unenforceability, we would lose at least part, and perhaps all, of the patent protection on our product candidates. An adverse result in any litigation or defense proceedings could put one or more of our patents at risk of being invalidated or interpreted narrowly, could put our patent applications at risk of not issuing and could have a material adverse impact on our business.

Interference proceedings provoked by third parties or brought by us may be necessary to determine the priority of inventions with respect to our patent applications. An unfavorable outcome could require us to cease using the related technology or to attempt to license rights to it from the prevailing party. Our business could be harmed if the prevailing party does not offer us a license on commercially reasonable terms. Our defense of litigation or interference proceedings may fail and, even if successful, may result in substantial costs and distract our management and other employees. We may not be able to prevent misappropriation of our intellectual property rights, particularly in countries where the laws may not protect those rights as fully as in the United States.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. There could also be public announcements of the results of hearings, motions, or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a material adverse effect on the price of our common stock.

Third parties may initiate legal proceedings alleging that we are infringing their intellectual property rights, the outcome of which would be uncertain.

As our current and future product candidates progress toward commercialization, the possibility of a patent infringement claim against us increases. There can be no assurance that our current and future product candidates do not infringe other parties' patents or other proprietary rights, and competitors or other parties may assert that we infringe their proprietary rights in any event. We may become party to, or threatened with, adversarial proceedings or litigation regarding intellectual property rights with respect to our current and future product candidates, including interference or derivation proceedings before the USPTO. Even if we believe such claims are without merit, a court of competent jurisdiction could hold that these third-party patents are valid, enforceable and infringed, which could have a negative impact on our ability to commercialize VP-102 and any future product candidates. In order to successfully challenge the validity of any such U.S. patent in federal court, we would need to overcome a presumption of validity. As this burden is a high one requiring us to present clear and convincing evidence as to the invalidity of any such U.S. patent claim, there is no assurance that a court of competent jurisdiction would invalidate the claims of any such U.S. patent. Moreover, given the vast number of patents in our field of technology, we cannot be certain that we do not infringe existing patents or that we will not infringe patents that may be granted in the future. Because numerous parties have developed and/or commercialized, or are developing, a wide variety of applicator devices for use with topical dermatological medications, it is possible that third parties may assert that our applicator device infringes patents they own or have applied for. While we may decide to initiate proceedings to challenge the validity of these or other patents in the future, we may be unsuccessful, and courts or patent offices in the United States and abroad could uphold the validity of any such patent. Furthermore, because patent applications can take many years to issue and may be confidential for 18 months or more after filing, and because pending patent claims can be revised before issuance, there may be applications now pending which may later result in issued patents that may be infringed by the manufacture, use or sale of our product candidates. Regardless of when filed, we may fail to identify relevant third party patents or patent applications, or we may incorrectly conclude that a third party patent is invalid or not infringed by our product candidates or activities. If a patent holder believes our drug or product candidate infringes its patent, the patent holder may sue us even if we have received patent protection for our technology. Moreover, we may face patent infringement claims from non-practicing entities that have no relevant drug revenue and against whom our own patent portfolio may thus have no deterrent effect. If a patent infringement suit were threatened or brought against us, we could be forced to stop or delay research, development, manufacturing or sales of the drug or product candidate that is the subject of the actual or threatened suit.

If we are found to infringe a third party's intellectual property rights, we could be required to obtain a license from such third party to continue commercializing our product candidates. However, we may not be able to obtain any required license on commercially reasonable terms or at all. Even if a license can be obtained on acceptable terms, the rights may be non-exclusive, which could give our competitors access to the same technology or intellectual property rights licensed to us. If we fail to obtain a required license, we may be unable to effectively market product candidates based on our technology, which could limit our ability to generate revenue or achieve profitability and possibly prevent us from generating revenue sufficient to sustain our operations. Alternatively, we may need to redesign our infringing products, which may be impossible or require substantial time and monetary expenditure. Under certain circumstances, we could be forced, including by court orders, to cease commercializing our product candidates. In addition, in any such proceeding or litigation, we could be found liable for substantial monetary damages, potentially including treble damages and attorneys' fees, if we are found to have willfully infringed. A finding of infringement could prevent us from commercializing our product candidates or force us to cease some of our business operations, which could harm our business. Any claims by third parties that we have misappropriated their confidential information or trade secrets could have a similar negative impact on our business.

The cost to us in defending or initiating any litigation or other proceeding relating to patent or other proprietary rights, even if resolved in our favor, could be substantial, and litigation would divert our

management's attention. Some of our competitors may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could delay our research and development efforts and limit our ability to continue our operations.

We may be subject to claims that our employees, consultants, or independent contractors have wrongfully used or disclosed confidential information of third parties.

We employ individuals who were previously employed at other biotechnology or pharmaceutical companies. Although we try to ensure that our employees, consultants and advisors do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that we or our employees, consultants, or independent contractors have inadvertently or otherwise used or disclosed confidential information of our employees' former employers or other third parties. We may also be subject to claims that former employers or other third parties have an ownership interest in our future patents. Litigation may be necessary to defend against these claims. There is no guarantee of success in defending these claims, and even if we are successful, litigation could result in substantial cost and be a distraction to our management and other employees.

We may be subject to claims challenging the inventorship or ownership of our future patents and other intellectual property.

We may also be subject to claims that former employees, collaborators, or other third parties have an ownership interest in our patent applications, our future patents, or other intellectual property. We may be subject to ownership disputes in the future arising, for example, from conflicting obligations of consultants or others who are involved in developing our product candidates. Although it is our policy to require our employees and contractors who may be involved in the conception or development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who, in fact, conceives or develops intellectual property that we regard as our own, and we cannot be certain that our agreements with such parties will be upheld in the face of a potential challenge, or that they will not be breached, for which we may not have an adequate remedy. The assignment of intellectual property rights may not be self-executing or the assignment agreements may be breached, and litigation may be necessary to defend against these and other claims challenging inventorship or ownership. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as exclusive ownership of, or right to use, valuable intellectual property. Such an outcome could have a material adverse effect on our business. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees.

Reliance on third parties requires us to share our trade secrets, which increases the possibility that a competitor will discover them or that our trade secrets will be misappropriated or disclosed.

If we rely on third parties to manufacture or commercialize VP-102 or any future product candidates, or if we collaborate with additional third parties for the development of VP-102 or any future product candidates, we must, at times, share trade secrets with them. We may also conduct joint research and development programs that may require us to share trade secrets under the terms of our research and development partnerships or similar agreements. We seek to protect our proprietary technology in part by entering into confidentiality agreements and, if applicable, material transfer agreements, consulting agreements or other similar agreements with our advisors, employees, third-party contractors and consultants prior to beginning research or disclosing proprietary information. These agreements typically limit the rights of the third parties to use or disclose our confidential information, including our trade secrets. Despite the contractual provisions employed when working with third parties, the need to share trade secrets and other confidential information increases the risk that such trade secrets become known by our competitors, are inadvertently incorporated into the technology of others, or are disclosed or used in violation of these agreements. Given that our proprietary position is based, in part, on our know-how

and trade secrets, a competitor's discovery of our trade secrets or other unauthorized use or disclosure could have an adverse effect on our business and results of operations.

In addition, these agreements typically restrict the ability of our advisors, employees, third-party contractors and consultants to publish data potentially relating to our trade secrets. Despite our efforts to protect our trade secrets, we may not be able to prevent the unauthorized disclosure or use of our technical know-how or other trade secrets by the parties to these agreements. Moreover, we cannot guarantee that we have entered into such agreements with each party that may have or have had access to our confidential information or proprietary technology and processes. Monitoring unauthorized uses and disclosures is difficult, and we do not know whether the steps we have taken to protect our proprietary technologies will be effective. If any of the collaborators, scientific advisors, employees, contractors and consultants who are parties to these agreements breaches or violates the terms of any of these agreements, we may not have adequate remedies for any such breach or violation, and we could lose our trade secrets as a result. Moreover, if confidential information that is licensed or disclosed to us by our partners, collaborators, or others is inadvertently disclosed or subject to a breach or violation, we may be exposed to liability to the owner of that confidential information. Enforcing a claim that a third-party illegally obtained and is using our trade secrets, like patent litigation, is expensive and time consuming, and the outcome is unpredictable. In addition, courts outside the United States are sometimes less willing to protect trade secrets.

Intellectual property rights do not necessarily address all potential threats to our competitive advantage.

The degree of future protection afforded by our intellectual property rights is uncertain because intellectual property rights have limitations, and may not adequately protect our business or permit us to maintain our competitive advantage. The following examples are illustrative:

- others may be able to make products that are similar to our product candidates but that are not covered by the claims of our future patents;
- we or future collaborators might not have been the first to make the inventions covered by our future issued patents or our pending patent applications;
- we or future collaborators might not have been the first to file patent applications covering certain of our inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our intellectual property rights;
- it is possible that our pending patent applications will not lead to issued patents;
- issued patents that we own may be held invalid or unenforceable as a result of legal challenges by our competitors;
- issued patents that we own may not provide coverage for all aspects of our product candidates in all countries;
- our competitors might conduct research and development activities in countries where we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- we may not develop additional proprietary technologies that are patentable; and
- the patents of others may have an adverse effect on our business.

Should any of these events occur, they could significantly harm our business, results of operations and prospects.

Risks Related to Legal and Regulatory Compliance Matters

Our relationships with customers, physicians, and third-party payors are subject, directly or indirectly, to federal and state healthcare fraud and abuse laws, false claims laws, health information privacy and security laws, and other healthcare laws and regulations. If we are unable to comply, or have not fully complied, with such laws, we could face substantial penalties.

Healthcare providers, physicians and third-party payors in the United States and elsewhere will play a primary role in the recommendation and prescription of any product candidates for which we obtain marketing approval. Our current and future arrangements with healthcare professionals, principal investigators, consultants, customers and third-party payors subject us to various federal and state fraud and abuse laws and other healthcare laws, including, without limitation, the federal Anti-Kickback Statute, the federal civil and criminal false claims laws and the law commonly referred to as the Physician Payments Sunshine Act and regulations. These laws will impact, among other things, our clinical research, proposed sales, marketing and educational programs, and other interactions with healthcare professionals. In addition, we may be subject to patient privacy laws by both the federal government and the states in which we conduct or may conduct our business. The laws that will affect our operations include, but are not limited to:

- the federal Anti-Kickback Statute, which prohibits, among other things, individuals or entities from knowingly and willfully soliciting, receiving, offering or paying any remuneration, directly or indirectly, overtly or covertly, in cash or in kind, in return for the purchase, recommendation, leasing or furnishing of an item or service reimbursable under a federal healthcare program, such as the Medicare and Medicaid programs. The term "remuneration" has been broadly interpreted to include anything of value. Although there are a number of statutory exceptions and regulatory safe harbors protecting some common activities from prosecution, the exceptions and safe harbors are drawn narrowly. Practices that involve remuneration that may be alleged to be intended to induce prescribing, purchases or recommendations may be subject to scrutiny if they do not qualify for an exception or safe harbor. A person does not need to have actual knowledge of this statute or specific intent to violate it in order to have committed a violation. In addition, the ACA provides that the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the False Claims Act and the civil monetary penalties statute;

- the federal civil and criminal false claims laws, including, without limitation, the False Claims Act, and civil monetary penalty laws which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment or approval from Medicare, Medicaid or other government payors that are false or fraudulent or making a false statement to avoid, decrease or conceal an obligation to pay money to the federal government. A claim includes "any request or demand" for money or property presented to the U.S. government. Several pharmaceutical and other healthcare companies have been prosecuted under these laws for allegedly providing free product to customers with the expectation that the customers would bill federal programs for the product. Other companies have been prosecuted for causing false claims to be submitted because of the companies' marketing of products for unapproved, and thus non-reimbursable, uses;

- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, created additional federal criminal statutes which prohibit, among other things, a person from knowingly and willfully executing a scheme to defraud any healthcare benefit program, including private third-party payors and knowingly and willfully falsifying, concealing or covering up a material fact or

making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services. Similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation; HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, or HITECH, and its implementing regulations, which imposes certain requirements relating to the privacy, security and transmission of individually identifiable health information without appropriate authorization on certain health plans, healthcare clearinghouses and certain healthcare providers, known as covered entities, and their respective business associates, independent contractors that perform certain services involving the use or disclosure of individually identifiable health information. HITECH also created new tiers of civil monetary penalties, amended HIPAA to make civil and criminal penalties directly applicable to business associates, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce HIPAA and seek attorneys' fees and costs associated with pursuing federal civil actions;

- The federal transparency laws, including the federal Physician Payments Sunshine Act, which requires certain manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program, with specific exceptions, to report annually to the Centers for Medicare & Medicaid Services, or CMS, information related to: (i) payments or other "transfers of value'' made to physicians teaching hospitals and applicable manufacturers; and (ii) ownership and investment interests held by physicians and their immediate family members; and

- State and foreign law equivalents of each of the above federal laws; state laws that require manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures; state laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government, or that otherwise restrict payments that may be made to healthcare providers; state and local laws that require the registration of pharmaceutical sales representatives; and state and foreign laws that govern the privacy and security of health information in some circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

Because of the breadth of these laws and the narrowness of the statutory exceptions and regulatory safe harbors available, it is possible that some of our business activities could be subject to challenge under one or more of such laws. It is possible that governmental authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of these laws or any other governmental regulations that may apply to us, we may be subject to significant civil, criminal and administrative penalties, damages, fines, disgorgement, imprisonment, exclusion from participating in government funded healthcare programs, such as Medicare and Medicaid, additional reporting requirements and oversight if we become subject to a corporate integrity agreement or similar agreement to resolve allegations of non-compliance with these laws, contractual damages, reputational harm and the curtailment or restructuring of our operations.

The risk of our being found in violation of these laws is increased by the fact that many of them have not been fully interpreted by the regulatory authorities or the courts, and their provisions are open to a variety of interpretations. Efforts to ensure that our business arrangements with third parties will comply with applicable healthcare laws and regulations will involve substantial costs. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business. The shifting compliance environment and the need to build and maintain robust and expandable systems to comply with multiple jurisdictions with different compliance and/or reporting requirements increases the possibility that a healthcare company may run afoul of one or more of the requirements.

The FDA and other regulatory agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses.

If VP-102 or other product candidates that we may identify are approved and we are found to have improperly promoted off-label uses of those products, we may become subject to significant liability. The FDA and other regulatory agencies strictly regulate the promotional claims that may be made about prescription products, such as our product candidates, if approved. In particular, a product may not be promoted for uses that are not approved by the FDA or such other regulatory agencies as reflected in the product's approved labeling. If we are found to have promoted such off-label uses, we may become subject to significant liability. The federal government has levied large civil and criminal fines against companies for alleged improper promotion of off-label use and has enjoined several companies from engaging in off-label promotion. The FDA has also requested that companies enter into consent decrees or permanent injunctions under which specified promotional conduct is changed or curtailed. If we cannot successfully manage the promotion of our product candidates, if approved, we could become subject to significant liability, which would materially adversely affect our business and financial condition.

Even if we obtain regulatory approval for VP-102 or any future product candidates, they will remain subject to ongoing regulatory oversight.

Even if we obtain any regulatory approval for VP-102 or any future product candidates, such product candidates, once approved, will be subject to ongoing regulatory requirements for manufacturing, labeling, packaging, storage, advertising, promoting, sampling, record-keeping and submitting of safety and other post-market information among other things. Any regulatory approvals that we receive for VP-102 or any future product candidates may also be subject to a REMS, limitations on the approved indicated uses for which the drug may be marketed or to the conditions of approval, or contain requirements for potentially costly post-marketing testing, including Phase 4 trials, and surveillance to monitor the quality, safety and efficacy of the drug. An unsuccessful post-marketing study or failure to complete such a study could result in the withdrawal of marketing approval. We will further be required to immediately report any serious and unexpected adverse events and certain quality or production problems with our products to regulatory authorities along with other periodic reports.

Any new legislation addressing drug safety issues could result in delays in product development or commercialization, or increased costs to assure compliance. We will also have to comply with requirements concerning advertising and promotion for our products. Promotional communications with respect to prescription drug products are subject to a variety of legal and regulatory restrictions and must be consistent with the information in the product's approved label. As such, we will not be allowed to promote our products for indications or uses for which they do not have approval. The holder of an approved NDA must submit new or supplemental applications and obtain prior approval for certain changes to the approved product, product labeling, or manufacturing process.

In addition, drug manufacturers and their facilities are subject to payment of user fees and continual review and periodic inspections by the FDA and other regulatory authorities for compliance with cGMP requirements and adherence to commitments made in the NDA or foreign marketing application. If we, or a regulatory authority, discover previously unknown problems with a drug, such as adverse events of unanticipated severity or frequency, or problems with the facility where the drug is manufactured or if a regulatory authority disagrees with the promotion, marketing or labeling of that drug, a regulatory authority may impose restrictions relative to that drug, the manufacturing facility or us, including requesting a recall or requiring withdrawal of the drug from the market or suspension of manufacturing.

If we fail to comply with applicable regulatory requirements following approval of VP-102 or any future product candidates, a regulatory authority may:

- issue an untitled letter or warning letter asserting that we are in violation of the law;

- seek an injunction or impose administrative, civil or criminal penalties or monetary fines;
- suspend or withdraw regulatory approval;
- suspend any ongoing clinical trials;
- refuse to approve a pending NDA or comparable foreign marketing application (or any supplements thereto) submitted by us or our strategic partners;
- restrict the marketing or manufacturing of the drug;
- seize or detain the drug or otherwise require the withdrawal of the drug from the market;
- refuse to permit the import or export of product candidates; or
- refuse to allow us to enter into supply contracts, including government contracts.

Any government investigation of alleged violations of law could require us to expend significant time and resources in response and could generate negative publicity. The occurrence of any event or penalty described above may inhibit our ability to commercialize VP-102 or any future product candidates and harm our business, financial condition, results of operations and prospects.

Healthcare legislative or regulatory reform measures may have a negative impact on our business and results of operations.

In the United States and some foreign jurisdictions, there have been, and continue to be, several legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay marketing approval of product candidates, restrict or regulate post-approval activities, and affect our ability to profitably sell any product candidates for which we obtain marketing approval.

Among policy makers and payors in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality and/or expanding access. In the United States, the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives. In March 2010, the ACA was passed, which substantially changed the way healthcare is financed by both the government and private insurers, and significantly impacts the U.S. pharmaceutical industry. The ACA, among other things: (i) increased the minimum Medicaid rebates owed by manufacturers under the Medicaid Drug Rebate Program and extends the rebate program to individuals enrolled in Medicaid managed care organizations; (ii) established an annual, nondeductible fee on any entity that manufactures or imports certain specified branded prescription drugs and biologic agents apportioned among these entities according to their market share in some government healthcare programs; (iii) expanded the availability of lower pricing under the 340B drug pricing program by adding new entities to the program; (iv) increased the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program, to 23.1% and 13% of the average manufacturer price for most branded and generic drugs, respectively and capped the total rebate amount for innovator drugs at 100% of the Average Manufacturer Price, or AMP; (v) expanded the eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to additional individuals and by adding new mandatory eligibility categories for individuals with income at or below 133% of the federal poverty level, thereby potentially increasing manufacturers' Medicaid rebate liability; (vi) created a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research; and (vii) established a Center for Medicare Innovation at CMS to test innovative payment and service delivery models to lower Medicare and Medicaid spending, potentially including prescription drug.

Some of the provisions of the ACA have yet to be implemented, and there have been judicial and Congressional challenges to certain aspects of the ACA, as well as recent efforts by the Trump administration to repeal or replace certain aspects of the ACA. While Congress has not passed comprehensive repeal legislation, bills affecting the implementation of certain taxes under the ACA have been signed into law. The Tax Cuts and Jobs Act of 2017 includes a provision repealing, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the "individual mandate". Additionally, on January 22, 2018, President Trump signed a continuing resolution on appropriations for fiscal year 2018 that delayed the implementation of certain ACA-mandated fees, including the so-called "Cadillac" tax on certain high cost employer-sponsored insurance plans, the annual fee imposed on certain health insurance providers based on market share, and the medical device excise tax on non-exempt medical devices. Further, the Bipartisan Budget Act of 2018, or the BBA, among other things, amends the ACA, effective January 1, 2019, to close the coverage gap in most Medicare drug plans, commonly referred to as the "donut hole." We continue to evaluate the potential impact of the ACA and its possible repeal or replacement on our business.

Other legislative changes have been proposed and adopted since the ACA was enacted. These changes include aggregate reductions to Medicare payments to providers of 2% per fiscal year pursuant to the Budget Control Act of 2011, which began in 2013, and due to subsequent legislative amendments to the statute, including the BBA, will remain in effect through 2027 unless additional Congressional action is taken. The American Taxpayer Relief Act of 2012, among other things, further reduced Medicare payments to several providers, including hospitals and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. These new laws may result in additional reductions in Medicare and other healthcare funding, which could have an adverse effect on customers for our product candidates, if approved, and, accordingly, our financial operations.

Additionally, there has been heightened governmental scrutiny in the United States of pharmaceutical pricing practices in light of the rising cost of prescription drugs and biologics. Such scrutiny has resulted in several recent congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for products. At the federal level, the Trump administration's budget proposal for fiscal year 2019 contains further drug price control measures that could be enacted during the 2019 budget process or in other future legislation, including, for example, measures to permit Medicare Part D plans to negotiate the price of certain drugs under Medicare Part B, to allow some states to negotiate drug prices under Medicaid, and to eliminate cost sharing for generic drugs for low-income patients. While any proposed measures will require authorization through additional legislation to become effective, Congress and the Trump administration have each indicated that it will continue to seek new legislative and/or administrative measures to control drug costs. At the state level, legislatures are increasingly passing legislation and implementing regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

We expect that these and other healthcare reform measures that may be adopted in the future, may result in more rigorous coverage criteria and in additional downward pressure on the price that we receive for any approved drug. Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability, or commercialize our drugs.

In addition, FDA regulations and guidance may be revised or reinterpreted by the FDA in ways that may significantly affect our business and our products. The Trump administration has also taken several executive actions, including the issuance of a number of Executive Orders, that could impose significant burdens on, or

otherwise materially delay, the FDA's ability to engage in routine oversight activities such as implementing statutes through rulemaking, issuance of guidance, and review and approval of marketing applications. It is difficult to predict how these requirements will be interpreted and implemented and the extent to which they will impact the FDA's ability to exercise its regulatory authority. If these executive actions impose restrictions on the FDA's ability to engage in oversight and implementation activities in the normal course, our business may be negatively impacted. Any new regulations or guidance, including implementation of or new guidance regarding the frameworks for compounding under Sections 503A and 503B of the FDCA, or revisions or reinterpretations of existing regulations or guidance, may impose additional costs or lengthen FDA review times for VP-102 or any future product candidates. We cannot determine how changes in regulations, statutes, policies, or interpretations when and if issued, enacted or adopted, may affect our business in the future. Such changes could, among other things, require:

- additional clinical trials to be conducted prior to obtaining approval;
- changes to manufacturing methods;
- recalls, replacements, or discontinuance of one or more of our products; and
- additional recordkeeping.

Such changes would likely require substantial time and impose significant costs, or could reduce the potential commercial value of VP-102 or other product candidates by authorizing competition in the form of compounded cantharidin products, and could materially harm our business and our financial results. In addition, delays in receipt of or failure to receive regulatory clearances or approvals for any other products would harm our business, financial condition, and results of operations.

Our business activities may be subject to the Foreign Corrupt Practices Act, or FCPA, and similar anti-bribery and anti-corruption laws.

Our business activities may be subject to the FCPA and similar anti-bribery or anti-corruption laws, regulations or rules of other countries in which we operate. The FCPA generally prohibits offering, promising, giving, or authorizing others to give anything of value, either directly or indirectly, to a non-U.S. government official in order to influence official action, or otherwise obtain or retain business. The FCPA also requires public companies to make and keep books and records that accurately and fairly reflect the transactions of the corporation and to devise and maintain an adequate system of internal accounting controls. Our business is heavily regulated and therefore involves significant interaction with public officials, including officials of non-U.S. governments. Additionally, in many other countries, the health care providers who prescribe pharmaceuticals are employed by their government, and the purchasers of pharmaceuticals are government entities; therefore, our dealings with these prescribers and purchasers are subject to regulation under the FCPA. Recently the SEC and Department of Justice have increased their FCPA enforcement activities with respect to biotechnology and pharmaceutical companies. There is no certainty that all of our employees, agents, suppliers, manufacturers, contractors, or collaborators, or those of our affiliates, will comply with all applicable laws and regulations, particularly given the high level of complexity of these laws. Violations of these laws and regulations could result in fines, criminal sanctions against us, our officers, or our employees, the closing down of facilities, including those of our suppliers and manufacturers, requirements to obtain export licenses, cessation of business activities in sanctioned countries, implementation of compliance programs, and prohibitions on the conduct of our business. Any such violations could include prohibitions on our ability to offer our products in one or more countries as well as difficulties in manufacturing or continuing to develop our products, and could materially damage our reputation, our brand, our international expansion efforts, our ability to attract and retain employees, and our business, prospects, operating results, and financial condition.

Risks Related to Employee Matters and Managing Our Growth

Our future success depends on our ability to retain key executives and to attract, retain and motivate qualified personnel.

We are highly dependent on the management, development, clinical, financial and business development expertise of Ted White, our President and Chief Executive Officer, Linda Palczuk, our Chief Operating Officer, Joe Bonaccorso, our Chief Commercial Officer, Chris Degnan, our Chief Financial Officer, Matt Davidson, our Chief Scientific Officer, and the other members of our scientific and clinical teams. While we have entered into employment agreements with our executive officers, each of them may currently terminate their employment with us at any time. We do not maintain "key person" insurance for any of our executives or employees.

Recruiting and retaining qualified scientific and clinical personnel and, if we progress the development of our product pipeline toward scaling up for commercialization, manufacturing and sales and marketing personnel, will also be critical to our success. The loss of the services of our executive officers or other key employees could impede the achievement of our development and commercialization objectives and seriously harm our ability to successfully implement our business strategy. Furthermore, replacing executive officers and key employees may be difficult and may take an extended period of time because of the limited number of individuals in our industry with the breadth of skills and experience required to successfully develop, gain regulatory approval of and commercialize products. Competition to hire from this limited pool is intense, and we may be unable to hire, train, retain or motivate these key personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for similar personnel. We also experience competition for the hiring of scientific and clinical personnel from universities and research institutions. In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our development and commercialization strategy. Our consultants and advisors may be employed by employers other than us and may have commitments under consulting or advisory contracts with other entities that may limit their availability to us. If we are unable to continue to attract and retain high quality personnel, our ability to pursue our growth strategy will be limited.

We expect to expand our development and regulatory capabilities and potentially implement sales, marketing and distribution capabilities, and as a result, we may encounter difficulties in managing our growth, which could disrupt our operations.

As of March 1, 2018, we had seven full-time employees. As our development progresses, we expect to experience significant growth in the number of our employees and the scope of our operations, particularly in the areas of product development, regulatory affairs and, if any of our product candidates receives marketing approval, sales, marketing and distribution. To manage our anticipated future growth, we must continue to implement and improve our managerial, operational and financial systems, expand our facilities and continue to recruit and train additional qualified personnel. Due to our limited financial resources and the limited experience of our management team in managing a company with such anticipated growth, we may not be able to effectively manage the expansion of our operations or recruit and train additional qualified personnel. The expansion of our operations may lead to significant costs and may divert our management and business development resources. Any inability to manage growth could delay the execution of our business plans or disrupt our operations.

Our employees, independent contractors, consultants, commercial collaborators, principal investigators, CROs, suppliers and vendors may engage in misconduct or other improper activities, including non-compliance with regulatory standards and requirements.

We are exposed to the risk that our employees, independent contractors, consultants, commercial collaborators, principal investigators, CROs, suppliers and vendors may engage in fraudulent conduct or other

illegal activity. Misconduct by these parties could include intentional, reckless and/or negligent conduct or disclosure of unauthorized activities to us that violates FDA regulations, including those laws requiring the reporting of true, complete and accurate information to the FDA, manufacturing standards, federal and state healthcare laws and regulations, and laws that require the true, complete and accurate reporting of financial information or data. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Misconduct by these parties could also involve the improper use of individually identifiable information, including, without limitation, information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. We have adopted a code of business conduct and ethics, but it is not always possible to identify and deter misconduct, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, including the imposition of significant civil, criminal and administrative penalties, including, without limitation, damages, fines, disgorgement, imprisonment, exclusion from participation in government healthcare programs, such as Medicare and Medicaid, additional reporting requirements and oversight if we become subject to a corporate integrity agreement or similar agreement to resolve allegations of non-compliance with these laws, and the curtailment or restructuring of our operations.

Risks Related to this Offering, Ownership of Our Common Stock and Our Status as a Public Company

An active trading market for our common stock may not develop and you may not be able to resell your shares of our common stock at or above the initial offering price, if at all.

Prior to this offering, there has been no public market for our common stock. The initial public offering price for our common stock has been determined through negotiations with the underwriters and may not be indicative of the price at which our common stock will trade after the closing of this offering. Although our common stock has been approved for listing on The Nasdaq Global Market, an active trading market for our shares may never develop or be sustained following this offering. If an active market for our common stock does not develop or is not sustained, it may be difficult for you to sell shares you purchased in this offering at an attractive price or at all.

The trading price of the shares of our common stock may be volatile, and purchasers of our common stock could incur substantial losses.

Our stock price may be volatile. The stock market in general and the market for biopharmaceutical companies in particular have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. As a result of this volatility, investors may not be able to sell their common stock at or above the price paid for the shares. The market price for our common stock may be influenced by many factors, including:

- the commencement, enrollment or results of our clinical trials of VP-102 for the treatment of molluscum and common warts and any future clinical trials we may conduct, or changes in the development status of our product candidates;

- any delay in our regulatory filings for VP-102 for the treatment of molluscum and common warts or any other product candidate we may develop, including VP-103, and any adverse development or perceived adverse development with respect to the applicable regulatory authority's review of such filings, including without limitation the FDA's issuance of a "refusal to file" letter or a request for additional information;

- adverse results from, delays in or termination of clinical trials;
- adverse regulatory decisions, including failure to receive regulatory approval of our product candidates;
- unanticipated serious safety concerns related to the use of VP-102 or any other product candidate;
- changes in financial estimates by us or by any securities analysts who might cover our stock;
- conditions or trends in our industry;
- changes in the market valuations of similar companies;
- stock market price and volume fluctuations of comparable companies and, in particular, those that operate in the biopharmaceutical industry;
- publication of research reports about us or our industry or positive or negative recommendations or withdrawal of research coverage by securities analysts;
- announcements by us or our competitors of significant acquisitions, strategic partnerships or divestitures;
- announcements of investigations or regulatory scrutiny of our operations or lawsuits filed against us;
- investors' general perception of our company and our business;
- recruitment or departure of key personnel;
- overall performance of the equity markets;
- trading volume of our common stock;
- disputes or other developments relating to proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our technologies;
- significant lawsuits, including patent or stockholder litigation;
- general political and economic conditions; and
- other events or factors, many of which are beyond our control.

In addition, in the past, stockholders have initiated class action lawsuits against pharmaceutical and biotechnology companies following periods of volatility in the market prices of these companies' stock. Such litigation, if instituted against us, could cause us to incur substantial costs and divert management's attention and resources from our business.

If equity research analysts do not publish research or reports, or publish unfavorable research or reports, about us, our business or our market, our stock price and trading volume could decline.

The trading market for our common stock will be influenced by the research and reports that equity research analysts publish about us and our business. We do not currently have and may never obtain research

coverage by equity research analysts. Equity research analysts may elect not to provide research coverage of our common stock after this offering, and such lack of research coverage may adversely affect the market price of our common stock. In the event we do have equity research analyst coverage, we will not have any control over the analysts or the content and opinions included in their reports. The price of our stock could decline if one or more equity research analysts downgrade our stock or issue other unfavorable commentary or research. If one or more equity research analysts ceases coverage of our company or fails to publish reports on us regularly, demand for our stock could decrease, which in turn could cause our stock price or trading volume to decline.

If you purchase shares of our common stock in this offering, you will suffer immediate dilution of your investment.

We expect the initial public offering price of our common stock to be substantially higher than the net tangible book value per share of our common stock. Therefore, if you purchase shares of our common stock in this offering, you will pay a price per share that substantially exceeds our pro forma as adjusted net tangible book value per share after this offering. Based on the initial public offering price of $ per share, you will experience immediate dilution of $ per share, representing the difference between our pro forma as adjusted net tangible book value per share after this offering and the initial public offering price.

In addition, as of March 15, 2018, we had outstanding stock options to purchase an aggregate of 1,981,476 shares of common stock at a weighted average exercise price of $ per share. To the extent these outstanding options are exercised, there will be further dilution to investors in this offering.

A significant portion of our total outstanding shares are restricted from immediate resale but may be sold into the market in the near future. This could cause the market price of our common stock to drop significantly, even if our business is doing well.

Sales of a substantial number of shares of our common stock in the public market could occur at any time. If our stockholders sell, or the market perceives that our stockholders intend to sell, substantial amounts of our common stock in the public market following this offering, the market price of our common stock could decline significantly.

Upon the closing of this offering, we will have outstanding shares of common stock, after giving effect to the conversion of our convertible preferred stock outstanding as of , 2018 into shares of our common stock, and assuming no exercise of outstanding options. Of these shares, the shares sold in this offering will be freely tradable and additional shares of common stock will be available for sale in the public market beginning 180 days after the date of this prospectus following the expiration of lock-up agreements between some of our stockholders and the underwriters. Merrill Lynch, Pierce, Fenner & Smith Incorporated and Jefferies LLC of the underwriters may release these stockholders from their lock-up agreements with the underwriters at any time and without notice, which would allow for earlier sales of shares in the public market.

In addition, promptly following the closing of this offering, we intend to file one or more registration statements on Form S-8 under the Securities Act registering the issuance of approximately shares of common stock subject to options or other equity awards issued or reserved for future issuance under our equity incentive plans. Shares registered under these registration statements on Form S-8 will be available for sale in the public market subject to vesting arrangements and exercise of options, the lock-up agreements described above and the restrictions of Rule 144 in the case of our affiliates.

Additionally, after this offering, the holders of an aggregate of shares of our common stock, or their transferees, will have rights, subject to some conditions, to require us to file one or more registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. If we were to register the resale of these shares, they could be freely sold in the public

market. 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 stock could decline.

Provisions in our corporate charter documents and under Delaware law may prevent or frustrate attempts by our stockholders to change our management and hinder efforts to acquire a controlling interest in us, and the market price of our common stock may be lower as a result.

There are provisions in our certificate of incorporation and bylaws as they will be in effect following this offering that may make it difficult for a third party to acquire, or attempt to acquire, control of our company, even if a change of control was considered favorable by you and other stockholders. For example, our board of directors will have the authority to issue up to shares of preferred stock. The board of directors can fix the price, rights, preferences, privileges, and restrictions of the preferred stock without any further vote or action by our stockholders. The issuance of shares of preferred stock may delay or prevent a change of control transaction. As a result, the market price of our common stock and the voting and other rights of our stockholders may be adversely affected. An issuance of shares of preferred stock may result in the loss of voting control to other stockholders.

Our charter documents will also contain other provisions that could have an anti-takeover effect, including:

- only one of our three classes of directors will be elected each year;
- stockholders will not be entitled to remove directors other than by a 66 ⅔% vote and only for cause;
- stockholders will not be permitted to take actions by written consent;
- stockholders cannot call a special meeting of stockholders; and
- stockholders must give advance notice to nominate directors or submit proposals for consideration at stockholder meetings.

In addition, we are subject to the anti-takeover provisions of Section 203 of the Delaware General Corporation Law, which regulates corporate acquisitions by prohibiting Delaware corporations from engaging in specified business combinations with particular stockholders of those companies. These provisions could discourage potential acquisition proposals and could delay or prevent a change of control transaction. They could also have the effect of discouraging others from making tender offers for our common stock, including transactions that may be in your best interests. These provisions may also prevent changes in our management or limit the price that investors are willing to pay for our stock.

Concentration of ownership of our common stock among our existing executive officers, directors and principal stockholders may prevent new investors from influencing significant corporate decisions.

Upon the closing of this offering, our executive officers, directors and current beneficial owners of 5% or more of our common stock and their respective affiliates, including PBM Capital, will, in the aggregate, beneficially own % of our outstanding common stock. As a result, these persons, acting together, would be able to significantly influence all matters requiring stockholder approval, including the election and removal of directors, any merger, consolidation, sale of all or substantially all of our assets, or other significant corporate transactions.

Some of these persons or entities may have interests different than yours. For example, because many of these stockholders purchased their shares at prices substantially below the price at which shares are being sold in this offering and have held their shares for a longer period, they may be more interested in selling our company to an acquirer than other investors, or they may want us to pursue strategies that deviate from the interests of other stockholders.

We are an "emerging growth company" and, as a result of the reduced disclosure and governance requirements applicable to emerging growth companies, our common stock may be less attractive to investors.

We are an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, and we intend to take advantage of some of the exemptions from reporting requirements that are applicable to other public companies that are not emerging growth companies, including:

- being permitted to provide only two years of audited financial statements, in addition to any required unaudited interim financial statements, with correspondingly reduced "Management's Discussion and Analysis of Financial Condition and Results of Operations" disclosure in this prospectus;
- not being required to comply with the auditor attestation requirements in the assessment of our internal control over financial reporting;
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements;
- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements and registration statements; and
- not being required to hold a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved.

We cannot predict if investors will find our common stock less attractive because we will rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile. We may take advantage of these reporting exemptions until we are no longer an emerging growth company. We will remain an emerging growth company until the earlier of (1) the last day of the fiscal year (a) following the fifth anniversary of the closing of this offering, (b) in which we have total annual gross revenue of at least $1.07 billion, or (c) in which we are deemed to be a large accelerated filer, which means the market value of our common stock that is held by non-affiliates exceeds $700 million as of the prior June 30th, and (2) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three-year period.

Under Section 107(b) of the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards and, therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

If we fail to maintain proper and effective internal controls, our ability to produce accurate financial statements on a timely basis could be impaired.

After the closing of this offering, we will be subject to the reporting requirements of the Securities Exchange Act of 1934, the Sarbanes-Oxley Act and the rules and regulations of the stock market on which our common stock is listed. The Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal control over financial reporting.

Commencing with our fiscal year ending December 31, 2019, we must perform system and process evaluation and testing of our internal control over financial reporting to allow management to report on the effectiveness of our internal control over financial reporting in our Form 10-K filing for that year, as required by

Section 404 of the Sarbanes-Oxley Act. This will require that we incur substantial additional professional fees and internal costs to expand our accounting and finance functions and that we expend significant management efforts. Prior to this offering, we have never been required to test our internal control within a specified period, and, as a result, we may experience difficulty in meeting these reporting requirements in a timely manner.

We may identify weaknesses in our system of internal financial and accounting controls and procedures that could result in a material misstatement of our financial statements. Our internal control over financial reporting will not prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud will be detected.

If we are not able to comply with the requirements of Section 404 of the Sarbanes-Oxley Act in a timely manner, or if we are unable to maintain proper and effective internal controls, we may not be able to produce timely and accurate financial statements. If that were to happen, the market price of our stock could decline and we could be subject to sanctions or investigations by the stock exchange on which our common stock is listed, the Securities and Exchange Commission, or SEC, or other regulatory authorities.

We will have broad discretion in the use of proceeds 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 over the use of proceeds from this offering. You may not agree with our decisions, and our use of the proceeds may not yield any return on your investment. We expect to use the net proceeds to us from this offering, together with our existing cash, to complete our planned clinical trials, seek regulatory approval and fund the commercialization of VP-102 for the treatment of molluscum, to advance the clinical development of VP-102 for the treatment of common warts, as well as for working capital and other general corporate purposes, including to develop VP-103 and VP-102 for additional indications and to pursue our strategy to develop, in-license or acquire additional product candidates. In addition, we may use a portion of the proceeds from this offering to pursue our strategy to in-license or acquire additional product candidates. Our failure to apply the net proceeds from this offering effectively could compromise our ability to pursue our growth strategy and we might not be able to yield a significant return, if any, on our investment of these net proceeds. You will not have the opportunity to influence our decisions on how to use our net proceeds from this offering.

The recently passed comprehensive tax reform bill could adversely affect our business and financial condition.

On December 22, 2017, President Trump signed into law new legislation that significantly revises the Internal Revenue Code of 1986, as amended. The newly enacted federal income tax law, among other things, contains significant changes to corporate taxation, including reduction of the corporate tax rate from a top marginal rate of 35% to a flat rate of 21%, limitation of the tax deduction for interest expense to 30% of adjusted earnings (except for certain small businesses), effective for net operating losses incurred in taxable years beginning after December 31, 2017, limitation of the deduction for net operating losses to 80% of current year taxable income and elimination of net operating loss carrybacks, one time taxation of offshore earnings at reduced rates regardless of whether they are repatriated, elimination of U.S. tax on foreign earnings (subject to certain important exceptions), immediate deductions for certain new investments instead of deductions for depreciation expense over time, and modifying or repealing many business deductions and credits. Notwithstanding the reduction in the corporate income tax rate, the overall impact of the new federal tax law is uncertain and our business and financial condition could be adversely affected. In addition, it is uncertain how various states will respond to the newly enacted federal tax law. The impact of this tax reform on holders of our common stock is also uncertain and could be adverse. We urge you to consult with your legal and tax advisors with respect to this legislation and the potential tax consequences of investing in or holding our common stock.

Our effective tax rate may fluctuate, and we may incur obligations in tax jurisdictions in excess of accrued amounts.

We are subject to taxation in more than one tax jurisdiction. As a result, our effective tax rate is derived from a combination of applicable tax rates in the various places that we operate. In preparing our financial statements, we estimate the amount of tax that will become payable in each of such places. Nevertheless, our effective tax rate may be different than experienced in the past due to numerous factors, including passage of the newly enacted federal income tax law, changes in the mix of our profitability from jurisdiction to jurisdiction, the results of examinations and audits of our tax filings, our inability to secure or sustain acceptable agreements with tax authorities, changes in accounting for income taxes and changes in tax laws. Any of these factors could cause us to experience an effective tax rate significantly different from previous periods or our current expectations and may result in tax obligations in excess of amounts accrued in our financial statements.

We might not be able to utilize a significant portion of our net operating loss carryforwards.

As of December 31, 2017, we had federal and state net operating loss carryforwards of $7.0 million. The federal and state net operating loss carryforwards will begin to expire, if not utilized, by 2036. These net operating loss carryforwards could expire unused and be unavailable to offset future income tax liabilities. Under the newly enacted federal income tax law, federal net operating losses incurred in 2018 and in future years may be carried forward indefinitely, but the deductibility of such federal net operating losses is limited. It is uncertain how various states will respond to the newly enacted federal tax law. In addition, under Section 382 of the Internal Revenue Code of 1986, as amended, and corresponding provisions of state law, if a corporation undergoes an "ownership change," which is generally defined as a greater than 50% change, by value, in its equity ownership over a three-year period, the corporation's ability to use its pre-change net operating loss carryforwards and other pre-change tax attributes to offset its post-change income or taxes may be limited. We may experience ownership changes in the future as a result of subsequent shifts in our stock ownership, some of which may be outside of our control. If an ownership change occurs and our ability to use our net operating loss carryforwards is materially limited, it would harm our future operating results by effectively increasing our future tax obligations.

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

You should not rely on an investment in our common stock to provide dividend income. We have not declared or paid cash dividends on our common stock to date. We currently intend to retain our future earnings, if any, to fund the development and growth of our business. In addition, the terms of any existing or future debt agreements may 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. Investors seeking cash dividends should not purchase our common stock.

We will incur increased costs and demands upon management as a result of being a public company.

As a public company listed in the United States, we will incur significant additional legal, accounting and other costs, which we anticipate could be between $1.0 million and $2.0 million annually. These additional costs could negatively affect our financial results. In addition, changing laws, regulations and standards relating to corporate governance and public disclosure, including regulations implemented by the SEC and the Nasdaq Stock Market, may increase legal and financial compliance costs and make some activities more time-consuming. These laws, regulations and standards are subject to varying interpretations and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. We intend to invest resources to comply with evolving laws, regulations and standards, and this investment may result in increased general and administrative expenses and a diversion of management's time and attention from

revenue-generating activities to compliance activities. If notwithstanding our efforts to comply with new laws, regulations and standards, we fail to comply, regulatory authorities may initiate legal proceedings against us and our business may be harmed.

Failure to comply with these rules might also make it more difficult for us to obtain some types of insurance, including director and officer liability insurance, and we might be forced to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. The impact of these events could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, on committees of our board of directors or as members of senior management.

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware is the exclusive forum for certain litigation that may be initiated by our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware is the exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim for breach of a fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders, (iii) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law, our amended and restated certificate of incorporation or our amended and restated bylaws or (iv) any action asserting a claim governed by the internal affairs doctrine. The choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and other employees. Stockholders who do bring a claim in the Court of Chancery could face additional litigation costs in pursuing any such claim, particularly if they do not reside in or near the State of Delaware. The Court of Chancery may also reach different judgments or results than would other courts, including courts where a stockholder considering an action may be located or would otherwise choose to bring the action, and such judgments or results may be more favorable to us than to our stockholders. Alternatively, if a court were to find the choice of forum provision contained in our amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could adversely affect our business and financial condition.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements that involve substantial risks and uncertainties. The forward-looking statements are contained principally in the sections entitled "Prospectus Summary," "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations," "Business" and elsewhere in this prospectus. In some cases, you can identify forward-looking statements by terms such as "may," "will," "should," "expect," "plan," "anticipate," "could," "intend," "target," "project," "estimate," "believe," "estimate," "predict," "potential" or "continue" or the negative of these terms or other similar expressions intended to identify statements about the future. These statements speak only as of the date of this prospectus and involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our business, financial condition and results of operations. These forward-looking statements include, without limitation, statements about the following:

- our plans to develop and commercialize our product candidates;
- the timing of our planned clinical trials for VP-102 and our other product candidates;
- the timing of our NDA submission for VP-102 for the treatment of molluscum;
- the timing of and our ability to obtain and maintain regulatory approvals for VP-102 and our other product candidates;
- the clinical utility of our product candidates;
- our commercialization, marketing and manufacturing capabilities and strategy;
- our expectations about the willingness of healthcare professionals to use VP-102;
- our intellectual property position;
- our plans to in-license, acquire, develop and commercialize additional product candidates for other dermatological conditions to build a fully integrated dermatology company;
- our expected use of proceeds from this offering;
- our competitive position and the development of and projections relating to our competitors or our industry;
- our ability to identify, recruit and retain key personnel;
- the impact of laws and regulations;
- our expectations regarding the time during which we will be an emerging growth company under the JOBS Act;
- our plans to identify additional product candidates with significant commercial potential that are consistent with our commercial objectives; and
- our estimates regarding future revenue, expenses and needs for additional financing.

Because forward-looking statements are inherently subject to risks and uncertainties, some of which cannot be predicted or quantified and some of which are beyond our control, you should not rely on these forward-looking statements as predictions of future events. The events and circumstances reflected in our forward-looking statements may not be achieved or occur and actual results could differ materially from those projected in the forward-looking statements. You should refer to the "Risk Factors" section of this prospectus for a discussion of important factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements. Moreover, we operate in an evolving environment. New risk factors and uncertainties may emerge from time to time, and it is not possible for management to predict all risk factors and uncertainties. As a result of these factors, we cannot assure you that the forward-looking statements in this prospectus will prove to be accurate. Except as required by applicable law, we do not plan to publicly update or revise any forward-looking statements contained herein, whether as a result of any new information, future events, changed circumstances or otherwise. You should, however, review the factors and risks and other information we describe in the reports we will file from time to time with the SEC after the date of this prospectus.

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

INDUSTRY AND OTHER DATA

We obtained the industry, statistical and market data in this prospectus from our own internal estimates and research as well as from industry and general publications and research, surveys and studies conducted by third parties. All of the market data used in this prospectus involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such data. While we believe that each of these studies and publications is reliable, the industry in which we operate is subject to a high degree of uncertainty and risk due to a variety of important factors, including those described in the section titled “Risk Factors.” These and other factors could cause results to differ materially from those expressed in the estimates made by third parties and by us.

USE OF PROCEEDS

We estimate that the net proceeds from our issuance and sale of shares of our common stock in this offering will be approximately $ million (or $ million if the underwriters exercise in full their option to purchase additional shares), assuming an initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share would increase (decrease) the net proceeds to us from this offering by approximately $ 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 and estimated offering expenses payable by us. Each increase (decrease) of 1.0 million in the number of shares we are offering would increase (decrease) the net proceeds to us from this offering, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, by approximately $ million, assuming the assumed initial public offering price stays the same.

We intend to use the net proceeds from this offering, together with our existing cash, as follows:

- approximately $ million to complete our planned clinical trials, seek regulatory approval and fund the commercialization of VP-102 for the treatment of molluscum;
- approximately $ million to advance the clinical development of VP-102 for the treatment of common warts; and
- the remainder for working capital and other general corporate purposes, including to develop VP-103 and VP-102 for additional indications and to pursue our strategy to develop, in-license or acquire additional product candidates, although we have no agreements or commitments for any specific acquisitions or in-licenses as of the date of this prospectus.

We believe that the net proceeds of this offering, together with our existing cash, will enable us to fund our operations for at least . We have based this estimate on assumptions that may prove to be wrong, and we could use our available capital resources sooner than we expect.

This expected use of net proceeds from this offering and our existing cash represents our intentions based upon our current plans and business conditions, which could change in the future as our plans and business conditions evolve. Predicting the costs necessary to develop product candidates can be difficult. The amounts and timing of our actual expenditures may vary significantly depending on numerous factors, including the progress of our development, the status of and results from clinical trials, as well as any collaborations that we may enter into with third parties for our product candidates, and any unforeseen cash needs.

Our management will have broad discretion in the application of the net proceeds from this offering, and investors will be relying on the judgment of our management regarding the application of those net proceeds. The timing and amount of our actual expenditures will be based on many factors, including cash flows from operations and the anticipated growth of our business. Pending these uses, we plan to invest these net proceeds in short-term, interest bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the United States.

DIVIDEND POLICY

We have never declared or paid, and do not anticipate declaring or paying, in the foreseeable future, any cash dividends on our capital stock. 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.

CAPITALIZATION

The following table sets forth our cash, and our capitalization as of December 31, 2017:

- on an actual basis;
- on a pro forma basis to give effect to:
  - our sale of an aggregate of 4,606,267 shares of Series C convertible preferred stock in February and March 2018 at a purchase price of $4.559 per share for aggregate net proceeds of $21.0 million;
  - the conversion of all outstanding shares of our convertible preferred stock, including the shares of Series C convertible preferred stock issued in February and March 2018, into an aggregate of 27,847,223 shares of our common stock, which will occur immediately prior to the closing of this offering; and
  - the filing and effectiveness of our amended and restated certificate of incorporation upon the closing of this offering; and
- on a pro forma as adjusted basis to give further effect to our issuance and sale of shares of common stock in this offering at an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting the estimated underwriting discounts and estimated offering expenses payable by us.

Our capitalization following the closing of this offering will depend on the actual initial public offering price and other terms of this offering determined at pricing. You should read this information in conjunction with our financial statements and the related notes appearing at the end of this prospectus, the "Management's Discussion and Analysis of Financial Condition and Results of Operations" section and other financial information contained in this prospectus.

	As of December 31, 2017		
	Actual	Pro Forma	Pro Forma As Adjusted
	(in thousands, except share and per share data)		
Cash	$ 8,663		
Convertible preferred stock (Series A), $0.0001 par value; 21,302,972 shares authorized, issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	$ 10,508		
Convertible preferred stock (Series B), $0.0001 par value; 1,937,984 shares authorized, issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	5,000		
Convertible preferred stock (Series C), $0.0001 par value; no shares authorized, issued or outstanding, actual, pro forma and pro forma as adjusted	—		
Stockholders' (deficit) equity:			
Preferred stock, $0.0001 par value; no shares authorized, issued or outstanding, actual; shares authorized and no shares issued or outstanding, pro forma and pro forma as adjusted	—		
Common stock, $0.0001 par value; 33,236,900 shares authorized, 6,521,215 shares issued and 6,340,998 shares outstanding, actual; shares authorized, shares issued and outstanding, pro forma; shares authorized, shares issued and outstanding, pro forma as adjusted	1		
Treasury stock, at cost, 180,217 shares	0		
Additional paid-in capital	5,393		
Accumulated deficit	(12,435)		
Total stockholders' (deficit) equity	(7,041)		
Total capitalization	$ 8,467		

Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) the pro forma as adjusted amount of each of cash, additional paid in capital, total stockholders' (deficit) equity and total capitalization by approximately $ 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 estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase (decrease) of 1.0 million shares in the number of shares offered by us at the assumed initial public offering price per share of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) the pro forma as adjusted amount of each of additional paid in capital, total stockholders' (deficit) equity and total capitalization by approximately $ million.

The number of shares of our common stock outstanding in the table above excludes:

- 155,000 shares of our common stock issuable upon the exercise of stock options outstanding under our 2013 equity incentive plan as of December 31, 2017, at a weighted average exercise price of $0.52 per share;
- 1,826,476 shares of our common stock issuable upon the exercise of stock options outstanding under our 2013 equity incentive plan granted subsequent to December 31, 2017, at a weighted average exercise price of $ per share; and
- shares of our common stock reserved for future issuance under our 2018 equity incentive plan, which will become effective upon the pricing of this offering, as well as any automatic increases in the number of shares of common stock reserved for future issuance under this plan.

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 initial public offering price per share and the pro forma as adjusted net tangible book value per share of our common stock after this offering.

As of December 31, 2017, we had a historical net tangible book value of $8.5 million, or $1.34 per share of common stock. Our historical net tangible book value per share represents total tangible assets less total liabilities, divided by the number of shares of our common stock outstanding as of December 31, 2017.

Our pro forma net tangible book value as of December 31, 2017 was $ million, or $ per share of our common stock. Pro forma net tangible book value represents the amount of our total tangible assets less our total liabilities, after giving effect to (1) our sale of an aggregate of 4,606,267 shares of Series C convertible preferred stock in February and March 2018 for aggregate net proceeds of $ million, and (2) the conversion of all shares of our convertible preferred stock, including the shares of Series C convertible preferred stock issued in February and March 2018, into an aggregate of 27,847,223 shares of our common stock, which will occur immediately prior to the closing of this offering. Pro forma net tangible book value per share represents pro forma net tangible book value divided by the total number of shares outstanding as of December 31, 2017, after giving effect to the pro forma adjustments described in (1) and (2) above.

After giving further effect to the sale of shares of common stock in this offering at an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of December 31, 2017 would have been approximately $ million, or approximately $ per share. This amount represents an immediate increase in pro forma net tangible book value of $ per share to our existing stockholders and immediate dilution of approximately $ per share to new investors in this offering. We determine dilution by subtracting the as pro forma adjusted net tangible book value per share after this offering from the amount of cash that a new investor paid for a share of common stock in this offering.

The following table illustrates this dilution:

Assumed initial public offering price per share		$
Historical net tangible book value per share as of December 31, 2017	$1.34	
Increase per share attributable to the sale of Series C convertible preferred stock and conversion of all outstanding shares of convertible preferred stock		
Pro forma net tangible book value per share as of December 31, 2017		
Increase per share attributable to this offering		
Pro forma as adjusted net tangible book value per share after this offering		$
Dilution per share to new investors in this offering		$

Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) the pro forma as adjusted net tangible book value per share after this offering by approximately $, and dilution in pro forma net tangible book value per share to new investors by approximately $, 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 estimated underwriting discounts and commissions and estimated offering expenses payable by us. An increase of 1.0 million shares in the number of shares we are offering would increase the pro forma as adjusted net tangible book value per share after this offering by $ and decrease the dilution per share to new investors participating in this offering by $, assuming no change in the assumed initial public

offering price per share and after deducting the estimated underwriting discounts and commissions. A decrease of 1.0 million shares in the number of shares we are offering would decrease the pro forma as adjusted net tangible book value per share after this offering by $ and increase the dilution per share to new investors participating in this offering by $, assuming no change in the assumed initial public offering price per share and after deducting the estimated underwriting discounts and commissions.

If the underwriters exercise their option to purchase additional shares of our common stock in full, the pro forma as adjusted net tangible book value after this offering would be $ per share, the increase in pro forma net tangible book value per share would be $ and the dilution per share to new investors would be $ per share, in each case assuming an initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus.

The following table summarizes, as of December 31, 2017 on the pro forma as adjusted basis described above, the differences between the number of shares purchased from us, the total consideration paid to us in cash and the average price per share that existing stockholders and new investors paid for such shares. The calculation below is based on an assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, before deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

	Shares Purchased		Total Consideration		Average Price Per Share
	Number	Percent	Amount	Percent	
Existing stockholders		%	$	%	$
New investors					
Total		100%		100%	

The foregoing tables and calculations are based on the number of shares of our common stock outstanding as of December 31, 2017, and excludes:

- 155,000 shares of our common stock issuable upon the exercise of stock options outstanding under our 2013 equity incentive plan as of December 31, 2017, at a weighted average exercise price of $0.52 per share;
- 1,826,476 shares of our common stock issuable upon the exercise of stock options outstanding under our 2013 equity incentive plan granted subsequent to December 31, 2017, at a weighted average exercise price of $ per share; and
- shares of our common stock reserved for future issuance under our 2018 equity incentive plan, which will become effective upon the pricing of this offering, as well as any automatic increases in the number of shares of common stock reserved for future issuance under this plan.

To the extent that stock options are exercised, new stock options are issued under our equity incentive plan, or we issue additional shares of common stock in the future, 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 FINANCIAL DATA

You should read the following selected financial data together with our financial statements and the related notes thereto included elsewhere in this prospectus and the "Management's Discussion and Analysis of Financial Condition and Results of Operations" section of this prospectus. We have derived the statement of operations data for the years ended December 31, 2016 and 2017 and the balance sheet data as of December 31, 2016 and 2017 from our audited financial statements included elsewhere in this prospectus. Our historical results are not necessarily indicative of the results that should be expected in the future.

	Year Ended December 31,	
	2016	2017
	(in thousands, except share and per share data)	
Statement of Operations Data:		
Operating expenses:		
Research and development	$ 1,709	$ 3,730
General and administrative	204	727
Total operating expenses	1,913	4,457
Loss from operations	(1,913)	(4,457)
Other expense	—	(2)
Net loss	(1,913)	(4,459)
Deemed dividend on Series A preferred stock	—	(5,300)
Net loss attributable to common stockholders	$ (1,913)	$ (9,759)
Net loss per common share, basic and diluted	$ (0.30)	$ (0.70)
Net loss per share attributable to common stockholders, basic and diluted	$ (0.30)	$ (1.54)
Weighted average common shares outstanding, basic and diluted	6,316,235	6,340,357
Pro forma net loss per share, basic and diluted	$ (0.07)	$ (0.15)
Pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited)(1)		$ (0.33)
Pro forma weighted average common shares outstanding, basic and diluted (unaudited)(1)		29,581,313

(1) See note 2 to our financial statements included elsewhere in this prospectus for an explanation of the method used to calculate the pro forma based and diluted net loss per common share.

	As of December 31,	
	2016	2017
	(in thousands)	
Balance Sheet Data:		
Cash	$ 527	$ 8,663
Working capital(1)	125	8,467
Total assets	544	9,083
Convertible preferred stock	2,789	15,508
Total stockholders' deficit	(2,664)	(7,041)

(1) We define working capital as current assets less current liabilities. See our financial statements included elsewhere in this prospectus for further details regarding our current assets and current liabilities.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations together with our financial statements and the related notes and other financial information included elsewhere in this prospectus. Some of the information contained in this discussion and analysis or set forth elsewhere in this prospectus, including information with respect to our plans and strategy for our business, includes forward-looking statements that involve risks and uncertainties. You should review the "Risk Factors" section of this prospectus for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

We are a clinical-stage medical dermatology company focused on identifying, developing and commercializing innovative pharmaceutical products for the treatment of skin diseases with significant unmet needs. Our lead product candidate, VP-102, is a proprietary drug-device combination of our novel topical solution of cantharidin, a widely recognized, naturally sourced agent to treat topical dermatological conditions, administered through our single-use precision applicator. We are initially developing VP-102 for the treatment of molluscum, a highly contagious and primarily pediatric viral skin disease, and common warts. There are currently no FDA-approved products nor is there an established standard of care for either of these diseases, resulting in significant undertreated populations in two of the largest unmet needs in dermatology. VP-102 has the potential to be the first FDA-approved product for molluscum and for its active pharmaceutical ingredient to be characterized as an NCE with the regulatory exclusivity associated with that designation. We also intend to develop our second cantharidin-based product candidate, VP-103, for the treatment of plantar warts.

We have recently initiated two randomized, double-blind, multicenter placebo-controlled Phase 3 clinical trials of VP-102 for the treatment of molluscum, CAMP-1 and CAMP-2, and expect to report top-line results from these trials in the first half of 2019. If the results from these trials are favorable, we plan to submit an NDA to the FDA for the approval of VP-102 in 2019. CAMP-1 is being conducted under an SPA with the FDA. We are also enrolling patients in an open-label Phase 2 clinical trial of VP-102 for the treatment of common warts. We expect to report top-line results from this trial by the end of 2018. We retain exclusive, royalty-free rights to our product candidates across all indications.

Our strategy is to advance VP-102 through regulatory approval and self-commercialize in the United States for the treatment of several skin diseases. We intend to build a specialized sales organization in the United States focused on pediatric dermatologists, dermatologists and select pediatricians. In the future, we also intend to develop VP-102 for commercialization in additional geographic regions, either alone or together with a strategic partner.

We have a limited operating history. Since our inception in 2013, our operations have focused on developing VP-102, organizing and staffing our company, business planning, raising capital, establishing our intellectual property portfolio and conducting clinical trials. We do not have any product candidates approved for sale and have not generated any revenue from product sales. We have funded our operations primarily through the sale of equity and equity-linked securities. Since inception, we have raised an aggregate of $36.9 million of gross proceeds from the sale of convertible debt and shares of our preferred stock.

Since inception, we have incurred significant operating losses. Our net loss was $1.9 million and $4.5 million for the years ended December 31, 2016 and 2017, respectively. As of December 31, 2017, we had an accumulated deficit of $12.4 million. We expect to continue to incur significant expenses and operating losses for

the foreseeable future. We anticipate that our expenses will increase significantly in connection with our ongoing activities, as we:

- complete clinical development of VP-102 for the treatment of molluscum, including our ongoing Phase 3 clinical trials;
- prepare and file for regulatory approval of VP-102 for the treatment of molluscum;
- continue to invest in the clinical development of VP-102 for the treatment of common warts and other indications;
- develop our second cantharidin-based product candidate, VP-103, for the treatment of plantar warts;
- prepare for commercialization of VP-102, if approved, including the hiring of sales and marketing personnel;
- manufacture our product candidates or otherwise secure the clinical and commercial supply of our product candidates;
- hire additional research and development and selling, general and administrative personnel;
- maintain, expand and protect our intellectual property portfolio; and
- incur additional costs associated with operating as a public company following the completion of this offering.

Services Agreement with PBM Capital Group, LLC

In December 2015, we entered into a services agreement with PBM Capital Group, LLC, an affiliate of PBM Capital Investments, LLC, or the services agreement, to engage PBM Capital Group, LLC for certain business development, operations, technical, contract, accounting and back office support services. We agreed to pay PBM Capital Group, LLC a fee of $2,500 per month for these services. The services agreement had an initial term of 12 months and was extended on April 1, 2017 for an additional one-year term.

In March 2018, we entered into an amendment to the services agreement with PBM Capital Group, LLC effective as of April 1, 2018, which extended the term of the services agreement until March 31, 2019 and increased the management fee we are obligated to pay to PBM Capital Group, LLC to $50,000 per month. The services agreement as amended, provides for termination by us with 30 days advance notice or a mutually agreed upon effective date for transition as individual services are cancelled with a corresponding reduction in the monthly management fee.

Components of Results of Operations

Revenue

We have not generated any revenue since inception and do not expect to generate any revenue from the sale of products in the near future.

Operating Expenses

Research and Development Expenses

Research and development expenses consists of expenses incurred in connection with the discovery and development of our product candidates. We expense research and development costs as incurred. These expenses include:

- expenses incurred under agreements with contract research organizations, or CROs, as well as investigative sites and consultants that conduct our clinical trials and preclinical studies;
- manufacturing and supply scale-up expenses and the cost of acquiring and manufacturing preclinical and clinical trial supply and commercial supply, including manufacturing validation batches;
- outsourced professional scientific development services;
- employee-related expenses, which include salaries, benefits and stock-based compensation;
- expenses relating to regulatory activities; and
- laboratory materials and supplies used to support our research activities.

Research and development activities are central to our business model. Product candidates in later stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials. We expect our research and development expenses to increase significantly over the next several years as we increase personnel costs, including stock-based compensation, conduct our pivotal Phase 3 clinical trials for VP-102 in patients with molluscum, conduct our ongoing Phase 2 clinical trial of VP-102 in patients with common warts and conduct other clinical trials and prepare regulatory filings for our product candidates.

The successful development of our product candidates is highly uncertain. At this time, we cannot reasonably estimate or know the nature, timing and costs of the efforts that will be necessary to complete the remainder of the development of, or when, if ever, material net cash inflows may commence from our product candidates. This uncertainty is due to the numerous risks and uncertainties associated with the duration and cost of clinical trials, which vary significantly over the life of a project as a result of many factors, including:

- the number of clinical sites included in the trials;
- the length of time required to enroll suitable patients;
- the number of patients that ultimately participate in the trials;
- the number of doses patients receive;
- the duration of patient follow-up; and
- the results of our clinical trials.

Our expenditures are subject to additional uncertainties, including the terms and timing of regulatory approvals, and the expense of filing, prosecuting, defending and enforcing any patent claims or other intellectual property rights. We may never succeed in achieving regulatory approval for our product candidates. We may

obtain unexpected results from our clinical trials. We may elect to discontinue, delay or modify clinical trials of our product candidates. A change in the outcome of any of these variables with respect to the development of a product candidate could mean a significant change in the costs and timing associated with the development of that product candidate. For example, if the FDA or other regulatory authorities were to require us to conduct clinical trials beyond those that we currently anticipate, or if we experience significant delays in enrollment in any of our clinical trials, we could be required to expend significant additional financial resources and time on the completion of clinical development. Product commercialization will take several years and millions of dollars in development costs.

General and Administrative Expenses

General and administrative expenses consist principally of salaries and related costs for personnel in executive, administrative, including stock-based compensation, travel expenses and recruiting expenses. Other general and administrative expenses include professional fees for legal, accounting and tax-related services, insurance costs, as well as payments made under our services agreement with PBM.

We anticipate that our general and administrative expenses will increase as a result of increased payroll, expanded infrastructure and higher consulting, legal and tax-related services associated with maintaining compliance with stock exchange listing and SEC requirements, accounting and investor relations costs, and director and officer insurance premiums associated with being a public company. In addition, we expect to incur, at an increased rate compared to prior periods, significantly higher expenses associated with building a sales and marketing team in connection with the potential regulatory filing and approval of VP-102 for the treatment of molluscum. As a result, we expect to report significantly higher general and administrative expenses in 2018 and 2019.

Income Taxes

Since our inception in 2013, we have not recorded any U.S. federal or state income tax benefits for the net losses we have incurred in each year or our earned research and development tax credits, due to our uncertainty of realizing a benefit from those items. As of December 31, 2017, we had federal and state net operating loss carryforwards of approximately $7.0 million. The federal and state net operating loss carryforwards generated in the 2016 and 2017 tax years will begin to expire, if not utilized, by 2036. Utilization of the net operating loss carryforwards and tax credits may be subject to an annual limitation according to Section 382 of the Internal Revenue Code of 1986 as amended, and similar provisions.

Results of Operations

Comparison of Years Ended December 31, 2016 and 2017

The following table summarizes our results of operations for the years ended December 31, 2016 and 2017:

	Year Ended December 31,		
	2016	2017	Change
	(in thousands)		
Operating expenses:			
Research and development	$ 1,709	$ 3,730	$ 2,021
General and administrative	204	727	523
Total operating expenses	1,913	4,457	2,544
Loss from operations	(1,913)	(4,457)	(2,544)
Total other expense	—	(2)	(2)
Net loss	$(1,913)	$(4,459)	$(2,546)

Research and Development Expenses

Research and development expenses were $1.7 million for the year ended December 31, 2016, compared to $3.7 million for the year ended December 31, 2017. The increase of $2.0 million was primarily attributable to the manufacture of development batches of $0.4 million, costs associated with Phase 2 and Phase 3 clinical activities of $1.1 million and the addition of clinical support staff of $0.2 million.

General and Administrative Expenses

General and administrative expenses were $0.2 million for the year ended December 31, 2016, compared to $0.7 million for the year ended December 31, 2017. The increase of $0.5 million was primarily attributable to personnel recruiting fees of $0.2 million, professional audit and accounting fees of $0.1 million and legal fees of $0.1 million.

Liquidity and Capital Resources

Since our inception, we have not generated any revenue and have incurred net losses and negative cash flows from our operations. We have financed our operations since inception through sales of our convertible debt and convertible preferred stock, receiving aggregate gross proceeds of $36.9 million.

As of December 31, 2017, we had cash of $8.7 million. Cash in excess of immediate requirements is invested in accordance with our investment policy, primarily with a view to liquidity and capital preservation.

We currently have no ongoing material financing commitments, such as lines of credit or guarantees, that are expected to affect our liquidity over the next five years.

On February 20, 2018 and March 7, 2018, we issued and sold an aggregate of 4,606,267 shares of Series C Preferred Stock, at an issuance price of $4.559 per share, for gross proceeds of approximately $21.0 million.

Cash Flows

The following table summarizes our cash flows for the years ended December 31, 2016 and 2017:

	Year Ended December 31,	
	2016	2017
	(in thousands)	
Net cash used in operating activities	$(1,611)	$ (4,583)
Net cash provided by financing activities	483	12,719
Net (decrease) increase in cash and cash equivalents	$(1,128)	$ 8,136

Operating Activities

During the year ended December 31, 2017, operating activities used $4.6 million of cash, primarily resulting from a net loss of $4.5 million and from cash used by changes in operating assets and liabilities of $0.2 million, partially reduced for non-cash stock-based compensation of $0.1 million. Net cash used in changes in operating assets and liabilities consisted primarily of increases in prepaid expenses and other assets of $0.4 million partially offset by increases in accounts payable and accrued expenses of $0.2 million. The increase in prepaid expenses and other assets was primarily due to prepayments for clinical development activities.

During the year ended December 31, 2016, operating activities used $1.6 million of cash, primarily resulting from a net loss of $1.9 million, partially offset by cash provided by changes in operating assets and

liabilities of $0.3 million. Net cash provided by changes in operating assets and liabilities consisted primarily of increases in accounts payable and accrued expenses of $0.3 million. The increase in accounts payable and accrued expenses was primarily due to clinical development activities.

Financing Activities

During the year ended December 31, 2017, net cash provided by financing activities was $12.7 million as a result of net proceeds of $7.7 million received from a stock subscription receivable associated with the issuance of Series A preferred shares in December 2015 and net proceeds of $5.0 million received from the issuance Series B preferred shares in December 2017.

During the year ended December 31, 2016, net cash provided by financing activities was $0.5 million as a result of net proceeds received from a stock subscription receivable associated with the issuance of Series A preferred shares in December 2015.

Pursuant to the Series A Preferred Stock Purchase Agreement, PBM VP Holdings, LLC agreed to pay a stock subscription receivable of $8.5 million as we required additional funding to cover costs and expenses pursuant to a budget approved by our board of directors. We received $8.0 million during the year ended December 31, 2017 and $0.5 million during the year ended December 31, 2016.

Funding Requirements

We expect our expenses to increase in connection with our ongoing activities, particularly as we continue the research and development of, continue or initiate clinical trials of, and seek marketing approval for, our product candidates. In addition, if we obtain marketing approval for any of our product candidates, we expect to incur significant commercialization expenses related to sales, marketing, manufacturing and distribution. Furthermore, following the completion of this offering, we expect to incur additional costs associated with operating as a public company. Accordingly, we may need to obtain additional funding in connection with our continuing operations. If we are unable to raise capital when needed or on attractive terms, we would be forced to delay, reduce or eliminate our research and development programs or future commercialization efforts.

We expect our existing cash and cash equivalents, together with the net proceeds from this offering, will enable us to fund our operating expenses and capital expenditure requirements for at least . Our future capital requirements will depend on many factors, including:

- the scope, progress, results and costs of our clinical trials;
- the scope, prioritization and number of our research and development programs;
- the costs, timing and outcome of regulatory review of our product candidate;
- the costs of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending intellectual property-related claims;
- the extent to which we acquire or in-license other product candidates and technologies;
- the costs of securing manufacturing arrangements for commercial production; and
- the costs of establishing or contracting for sales and marketing capabilities if we obtain regulatory approvals to market our product candidate.

Identifying potential product candidates and conducting preclinical studies and clinical trials is a time-consuming, expensive and uncertain process that takes many years to complete, and we may never generate the

necessary data or results required to obtain marketing approval and achieve product sales. In addition, our product candidates, if approved, may not achieve commercial success. Our commercial revenues, if any, will be derived from sales of a product candidate that we do not expect to be commercially available in the near term, if at all. We may not achieve significant revenue from product sales prior to the use of the net proceeds from this offering. Accordingly, we may need to continue to rely on additional financing to achieve our business objectives. Adequate additional financing may not be available to us on acceptable terms, or at all.

Until such time, if ever, as we can generate substantial product revenues, we expect to finance our cash needs through a combination of equity offerings, debt financings, collaborations, strategic alliances and licensing arrangements. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a stockholder. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends.

If we raise funds through additional collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs or product candidates or to grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

Contractual Obligations & Commitments

We had no commitments to settle contractual obligations at December 31, 2017.

On March 22, 2018, we executed a purchase order, denominated in Chinese yuan, with a supplier, pursuant to which we agreed to purchase approximately $2.3 million of crude cantharidin material related to clinical and commercial supply.

Off-Balance Sheet Arrangements

We did not have during the periods presented, and we do not currently have, any off-balance sheet arrangements, as defined in the SEC rules and regulations.

Critical Accounting Policies

Our financial statements are prepared in accordance with generally accepted accounting principles in the United States, or GAAP. The preparation of our financial statements requires us to make estimates, assumptions and judgments that affect the reported amounts of assets, liabilities, costs and expenses. We base our estimates and assumptions on historical experience and other factors that we believe to be reasonable under the circumstances. We evaluate our estimates and assumptions on an ongoing basis. Our actual results may differ from these estimates. Our most critical accounting policies are summarized below. See note 2 to our financial statements beginning on page F-1 of this prospectus for a description of our other significant accounting policies.

Stock-Based Compensation

We measure and recognize compensation expense for all employee options based on the estimated fair value of the award on the grant date and non-employee options based on the estimated fair value of the award on the date when the options vest. We use the Black-Scholes option-pricing model to estimate the fair value of option awards. The fair value is recognized as expense on a straight-line basis over the requisite service period for each separately vesting portion of the award. We account for forfeitures as they occur. We have not issued

awards where vesting is subject to a market or performance condition; however, if we were to grant such awards in the future, recognition would be based on the derived service period. Expense for awards with performance conditions would be estimated and adjusted on a quarterly basis based upon our assessment of the probability that the performance condition will be met.

The determination of the grant date fair value of options using an option pricing model is affected principally by our estimated fair value of shares of our common stock and requires management to make a number of other assumptions, including the expected life of the option, the volatility of the underlying shares, the risk-free interest rate and expected dividends. The assumptions used in our Black-Scholes option-pricing model represent management's best estimates at the time of measurement. These estimates are complex, involve a number of variables, uncertainties and assumptions and the application of management's judgment, as they are inherently subjective. If any assumptions change, our stock-based compensation expense could be materially different in the future.

These assumptions are estimated as follows:

- *Fair Value of Common Stock*. As our common stock has not historically been publicly traded, we estimated the fair value of common stock. See "Fair Value of Common Stock" and "Common Stock Valuation Methodology" sections.

- *Expected Term*. The expected term represents the period that our options are expected to be outstanding. We calculated the expected term using the simplified method for employee options based on the average of each option's vesting term and the contractual period during which the option can be exercised, which is typically 10 years following the date of grant.

- *Expected Volatility*. The expected volatility was based on the historical share volatility of several of our comparable publicly traded companies over a period of time equal to the expected term of the options, as we do not have any trading history to use the volatility of our own common stock.

- *Risk-Free Interest Rate*. The risk-free interest rate was based on the yields of U.S. Treasury securities with maturities appropriate for the term of the award.

- *Expected Dividend Yield*. We have not paid dividends on our common stock nor do we expect to pay dividends in the foreseeable future.

The following table reflects the assumptions used to estimate the fair value of employee stock option awards during the year ended December 31, 2017:

	Year Ended December 31, 2017
Expected term (years)	6.25
Expected volatility	79.02% - 79.12%
Risk-free interest rate	1.92% - 2.23%
Expected dividend yield	—

Non-employee options are remeasured to fair value each period through operations using a Black-Scholes option-pricing model until the options vest. There were no stock options granted to non-employees during the year ended December 31, 2017. Key assumptions used to estimate the fair value of the non-employee stock options measured during the year ended December 31, 2016 included risk-free interest rates of 1.49% to 2.45%, an expected volatility of 74.94% to 79.17%, no expected dividend yield and an expected term equal to the remaining contractual option term. Key assumptions used to estimate the fair value of the non-employee stock options measured during the year ended December 31, 2017 included risk-free interest rates of 1.79% to 2.48%, an expected volatility of 77.59% to 79.12%, no expected dividend yield and an expected term equal to the remaining contractual option term.

Fair Value of Common Stock

Historically, for all periods prior to this offering, the fair values of the shares of common stock underlying our options were estimated on each grant date by our board of directors. In order to determine the fair value, our board of directors considered, among other things, contemporaneous valuations of our common stock and preferred stock prepared by unrelated third-party valuation firms in accordance with the guidance provided by the American Institute of Certified Public Accountants 2013 Practice Aid, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*, or the Practice Aid. Given the absence of a public trading market of our capital stock, our board of directors exercised reasonable judgment and considered a number of objective and subjective factors to determine the best estimate of the fair value of our common and preferred stock, including:

- contemporaneous third-party valuations of our common stock;
- the prices, rights, preferences and privileges of our preferred stock relative to our common stock;
- our business, financial condition and results of operations, including related industry trends affecting our operations;
- the likelihood of achieving a liquidity event, such as an initial public offering or sale of our company, given prevailing market conditions;
- the lack of marketability of our common stock;
- the market performance of comparable publicly traded companies; and
- U.S. and global economic and capital market conditions and outlook.

The following table summarizes by grant date the number of shares of common stock subject to options granted since January 1, 2017, as well as the associated per share exercise price and the estimated fair value per share as of the grant date:

Grant Date	Number of Options Granted	Exercise Price per Share of Common Stock	Estimated Fair Value Per Share of Common Stock
January 8, 2017	30,000	$ 0.52	$ 0.15
February 12, 2018	1,506,476	$ 3.80	$ 3.80
February 26, 2018	195,000	(1)	(1)
March 5, 2018	125,000	(1)	(1)

(1) The exercise price per share and estimated fair value per share of common stock will be determined by our board of directors based upon a valuation report as to the value of the common stock as of the applicable dates of grant.

Based on an assumed initial public offering price of $ per share of common stock, the midpoint of the price range set forth on the cover page of this prospectus, the intrinsic value of vested and unvested options outstanding as of December 31, 2017 was $ million.

Common Stock Valuation Methodology

In valuing our common stock, our board of directors determined the equity value of our business generally using a combination of the income approach and the market approach valuation methods.

We conducted a valuation as of December 31, 2016 which used our Series A preferred stock financing as a starting point and determined the equity value of our company based on a "back-solve" methodology that utilized the option pricing method, a value allocation methodology prescribed in the AICPA's guide "Valuation of Privately-Held-Company Equity Securities Issued as Compensation." The allocation methodology also allocated that equity value across the securities in our capital structure—our Series A preferred stock and common stock. A discount for lack of marketability was then applied to conclude a fair market value for each share of common stock as of December 31, 2016 and a downward market adjustment from December 5, 2015 to December 31, 2016.

We conducted valuations as of December 31, 2017 and February 12, 2018, which used a hybrid equity valuation and allocation model to determine our total equity value and resulting common stock per share value. The methodology aligns with the "Hybrid" method as described in the AICPA Guide for the Valuation of Privately Held Company Equity Securities Issued as Compensation that incorporates weighted outcomes akin to the Probability Weighted Expected Return Method.

Following the closing of this offering, the fair value of our common stock will be determined based on the closing price of our common stock on The Nasdaq Global Market.

Recent Accounting Pronouncements

See note 2 to our financial statements beginning on page F-1 of this prospectus for a description of recent accounting pronouncements applicable to our financial statements.

Qualitative and Quantitative Disclosures about Market Risk

Our primary exposure to market risk is interest rate sensitivity, which is affected by changes in the general level of U.S. interest rates, particularly because our investments, including cash equivalents, are in the form of a money market fund and marketable securities and are invested in U.S. Treasury obligations.

We are also exposed to market risk related to changes in foreign currency exchange rates. We contract with vendors that are located outside of the United States, including in China, and certain invoices are denominated in foreign currencies. We are subject to fluctuations in foreign currency rates in connection with these arrangements. We do not currently hedge our foreign currency exchange rate risk. As of December 31, 2017, we had minimal or no liabilities denominated in foreign currencies.

Inflation generally affects us by increasing our cost of labor and clinical trial costs. We do not believe that inflation had a material effect on our business, financial condition or results of operations during the year ended December 31, 2017.

JOBS Act Transition Period

In April 2012, the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, was enacted. Section 107 of the JOBS Act provides that an "emerging growth company" can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act for complying with new or revised accounting standards. Thus, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have irrevocably elected not to avail ourselves of this extended transition period and, as a result, we will adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies.

We are in the process of evaluating the benefits of relying on other exemptions and reduced reporting requirements under the JOBS Act. Subject to certain conditions, as an emerging growth company, we may rely on certain of these exemptions, including without limitation, (i) providing an auditor's attestation report on our

system of internal controls over financial reporting pursuant to Section 404(b) of the Sarbanes-Oxley Act and (ii) complying with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements, known as the auditor discussion and analysis. We will remain an emerging growth company until the earlier to occur of (1) the last day of the fiscal year (a) following the fifth anniversary of the completion of this offering, (b) in which we have total annual gross revenues of at least $1.07 billion or (c) in which we are deemed to be a "large accelerated filer" under the rules of the U.S. Securities and Exchange Commission, which means the market value of our common stock that is held by non-affiliates exceeds $700 million as of the prior June 30th, and (2) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three-year period.

BUSINESS

Overview

We are a clinical-stage medical dermatology company focused on identifying, developing and commercializing innovative pharmaceutical products for the treatment of skin diseases with significant unmet needs. Our lead product candidate, VP-102, is a proprietary drug-device combination of our novel topical solution of cantharidin, a widely recognized, naturally sourced agent to treat topical dermatological conditions, administered through our single-use precision applicator. We are initially developing VP-102 for the treatment of molluscum contagiosum, or molluscum, a highly contagious and primarily pediatric viral skin disease, and common warts. There are currently no products approved by the U.S. Food and Drug Administration, or FDA, nor is there an established standard of care for either of these diseases, resulting in significant undertreated populations in two of the largest unmet needs in dermatology. VP-102 has the potential to be the first FDA-approved product for molluscum and for its active pharmaceutical ingredient to be characterized as a new chemical entity, or NCE, with the regulatory exclusivity associated with that designation.

We have recently initiated two randomized, double-blind, multicenter, placebo-controlled Phase 3 clinical trials of VP-102 for the treatment of molluscum, CAMP-1 and CAMP-2, and expect to report top-line results from these trials in the first half of 2019. If the results from these trials are favorable, we plan to submit a New Drug Application, or NDA, to the FDA for the approval of VP-102 in 2019. CAMP-1 is being conducted under a special protocol assessment, or SPA, with the FDA. We are also enrolling patients in an open-label Phase 2 clinical trial of VP-102 for the treatment of common warts. We expect to report top-line results from this trial by the end of 2018. We retain exclusive, royalty-free rights to our product candidates across all indications.

Molluscum is a highly contagious common skin disease caused by a pox virus that produces multiple raised flesh-colored papules, or skin lesions. Molluscum typically presents with 10 to 30 lesions, which, if left untreated, persist for an average of 13 months, with some cases remaining unresolved for more than two years. The symptoms of molluscum tend to cause considerable anxiety, and parents frequently seek treatment due to its highly contagious nature and physical appearance.

Molluscum has a 5% to 11% prevalence rate in children with the greatest incidence in individuals aged one to 14 years old. Accordingly, we estimate this represents a total addressable U.S. market of over $1 billion. We believe that the molluscum prevalence rate in the European Union is at least as high as in the United States.

Compounded cantharidin has been used for many years by dermatologists to treat molluscum, but it has many limitations. Those limitations include that it is not FDA approved, could have highly variable purity, is not readily available and is often not produced in accordance with good manufacturing practices, or GMP. In addition, the formulation and administration of compounded cantharidin is not standardized and is poorly controlled. Other existing therapies, such as cryotherapy, curettage and laser surgery are also used, but are often painful and may lead to scarring. The potential for scarring and pain makes many of these treatments particularly unsuitable for children. As a result, a significant need exists for a clinically proven and FDA-approved treatment for molluscum.

We have designed VP-102 to address the significant limitations of current compounded cantharidin formulations for the treatment of molluscum, including with respect to safety, purity, efficacy, stability and ease of administration. VP-102 contains the first GMP-controlled formulation of cantharidin with a defined pharmaceutical batch process and an active pharmaceutical ingredient, or API, that is greater than 99% pure. We believe VP-102 addresses the shortcomings associated with current therapies, including pain and discomfort, potential scarring and inconsistent outcomes, and has the potential to be the first FDA-approved product for the treatment of molluscum.

We have completed one Phase 2 clinical trial of our proprietary topical solution of cantharidin administered with the wooden stick part of a cotton-tipped swab, which is the method of application historically

used with compounded cantharidin. We are conducting another Phase 2 clinical trial of our proprietary topical solution of cantharidin administered through our proprietary applicator, which we collectively refer to as VP-102, for the treatment of molluscum. In these trials, our proprietary topical solution of cantharidin has been observed to be well tolerated, with no severe adverse events or unexpected treatment related adverse events to date.

We are also developing VP-102 for the treatment of common warts. Approximately 2 million people seek treatment for common warts in the United States annually, and we estimate the total addressable U.S. market to be approximately $1.5 billion. In the United States, approximately 50% of the patients who seek treatment for common warts are children, and approximately 25% of common warts patients are treated by pediatricians. We believe that the common wart patient opportunity in the European Union is at least as large as that in the United States. There are currently no FDA-approved products indicated for the treatment of common warts. While common warts can be treated with slow acting, over-the-counter products, the warts tend to be highly refractory and a cause for multiple consultations. We believe that cantharidin's role as a widely recognized and effective blistering agent for the treatment of skin lesions, coupled with VP-102's safety and efficacy data in clinical trials for the treatment of molluscum and convenient ease of administration, will allow VP-102 to address many of the shortcomings associated with current therapies. We are currently enrolling patients in a Phase 2 open-label trial of VP-102 for the treatment of common warts. We expect to report top-line results from this trial by the end of 2018.

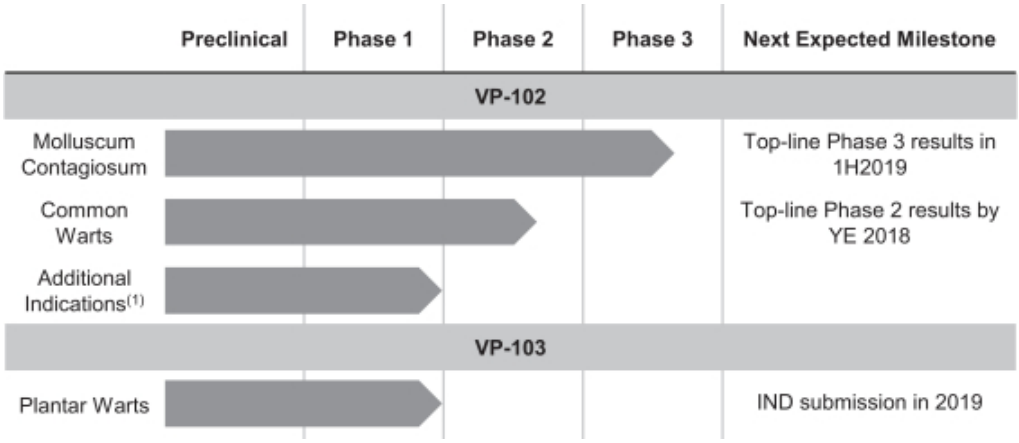
We also intend to develop our second cantharidin-based product candidate, VP-103, for the treatment of plantar warts. An estimated one-third of the approximately 4.1 million annual patient visits for all types of warts are for the treatment of plantar warts, which are warts located on the bottom of the foot. We expect to conduct IND-enabling studies for this product candidate and to submit an investigational new drug application, or IND, to the FDA by the end of 2019. Pending final formulation and IND clearance, we expect that we will be able to substantially leverage our experience with VP-102 to initiate trials directly in target patients with plantar warts. We also believe we have the opportunity to expand our proprietary cantharidin formulations for the treatment of additional dermatological conditions with high unmet needs.

We believe the current medical dermatology landscape provides an opportunity to establish ourselves as a leader in the space. With a more concentrated prescribing base of dermatologists versus other medical specialties, our management's proven track record and experience in new product launches, and the significant clinical benefits described above, we believe a targeted sales and marketing organization of approximately 50 to 60 sales representatives should enable us to capture market share swiftly in the United States, particularly in our current indications of focus.

Our management team has extensive pharmaceutical industry experience ranging from drug development through commercialization, having launched more than 50 products collectively. These products include dermatology products such as Lamisil, Elidel, Acticlate and Hemangeol and products having multi-billion dollar peak annual sales such as Nexium, Seroquel, Crestor and Diovan. The members of our management team have held senior leadership positions at a number of pharmaceutical and biotechnology companies, including Novartis, Aqua Pharmaceuticals (acquired by Almirall), AstraZeneca and Pierre Fabre. We believe that the breadth of experience and successful track record of our management team, combined with our broad network of established relationships with leaders in the industry and medical community, provide us with unique insights into drug development and commercialization. Furthermore, we have been supported by a group of leading biotech investors, including PBM Capital, Perceptive and OrbiMed.

Our Pipeline

The following table summarizes our product candidates. We retain exclusive, royalty-free rights for all our product candidates.



1 Additional indications under consideration include subungual warts, flat warts, actinic keratosis, genital warts and seborrheic keratosis.

Our Strategy

Our strategy is to identify, develop and commercialize innovative medical dermatology solutions for the treatment of skin diseases with significant unmet needs. The key components of our strategy are to:

- **Complete the development and obtain FDA approval of VP-102 for the treatment of molluscum.** In the first quarter of 2018, we initiated two randomized, double-blinded, multicenter placebo-controlled Phase 3 clinical trials of VP-102 for the treatment of molluscum, CAMP-1 and CAMP-2. CAMP-1 is being conducted under an SPA with the FDA. We believe VP-102 has the potential to become the standard of care in the underserved and undertreated primarily pediatric indication of molluscum. If the results of our Phase 3 clinical trials are favorable, we intend to submit an NDA for VP-102 for the treatment of molluscum to the FDA in 2019.

- **Commercialize VP-102 through the establishment of a specialized sales organization.** We intend to commercialize VP-102, if approved, by building a specialized sales organization in the United States focused on pediatric dermatologists, dermatologists and select pediatricians. We believe a scientifically oriented, customer-focused team of approximately 50 to 60 sales representatives would allow us to reach the approximately 400 pediatric dermatologists and 9,000 dermatologists in the United States with the highest potential for using VP-102. In the future, we may seek to develop and commercialize VP-102 for additional geographic regions, independently or with a strategic partner.

- **Advance the development and obtain FDA approval of VP-102 for the treatment of common warts.** We are also developing VP-102 for the treatment of common warts and expect to report top-line results from our Phase 2 clinical trial of VP-102 for the treatment of common warts by the end of 2018. If the results of our Phase 2 clinical trial are favorable, we intend to initiate registration-enabling trials in 2019.

- **Pursue additional development activities for our cantharidin-based product candidates.** We are currently evaluating and prioritizing other potential indications for our proprietary topical solutions of cantharidin such as plantar warts, flat warts, actinic keratoses, genital warts, subungual warts, and seborrheic keratoses. Specifically, we intend to conduct IND-enabling studies and submit an IND to the FDA for our second product candidate, VP-103, for the treatment of plantar warts in 2019. Additionally, we are developing a process for production of fully synthetic cantharidin.

- **Build a diversified multi-asset pipeline of novel therapies.** We intend to employ a value-driven strategy to identify, acquire, develop and commercialize product candidates for diseases that are treated by dermatologists. We intend to focus on product candidates that we believe have attractive profiles in early clinical testing and that can advance quickly and efficiently into late-stage development. As the dermatology landscape continues to evolve, we believe we can leverage the expertise and experience of our management team to be at the forefront of and capitalize on such opportunities.

Background of Cantharidin

Cantharidin Mechanism of Action

Cantharidin (1,2-Dimethyl-3,6-epoxyperhydrophthalic anhydride) is an inhibitor of protein phosphatase 2a, traditionally obtained from blister beetles. When applied topically, cantharidin functions as a vesicant, or blistering agent, predominantly through the release of neutral serine proteases that disrupt the proteins holding the layers of dermal and epidermal skin together. The resulting blistering causes the lesion to separate from the underlying skin. As the blister forms within the intraepidermal layer, healing generally occurs without scarring. According to published studies, cantharidin also initiates an inflammatory response that promotes recognition of the molluscum virus and expedites the clearance of both treated and untreated lesions.

Cantharidin History

The use of topical cantharidin for a wide variety of skin conditions by practitioners precedes the Federal Food, Drug, and Cosmetic Act of 1938, or the FDCA, which established only safety requirements and no requirement for efficacy. In 1962, the FDCA was amended to require that new drugs be shown to be both safe and effective prior to marketing and to date, topical cantharidin remains an unapproved drug with limited availability as it is illegal to import formulated cantharidin and the legal pathway to obtain cantharidin drug products is through compounding. Such compounding generally involves unstandardized, poorly controlled product.

Cantharidin's long history of use provides evidence of the safety profile of cantharidin drug products when applied topically. In February 2015, reviewers within the FDA's Division of Dermatology and Dental Products evaluated the then available data on cantharidin and concluded that the clinical information showed that, when used under careful physician direction, toxicities were no worse and sometimes less severe than other destructive treatments available for molluscum and warts.

Cantharidin Compounding and its Shortfalls

Although cantharidin has been used for over a century, a specification on the quality of cantharidin as an API, or in a standardized formulation has never been established. We believe that the historical compounded cantharidin formulations present a number of limitations, including:

- **Inconsistent Concentration.** Due to the volatility of the solvents used in compounded cantharidin, including diethyl ether, uncontrollable rapid solvent evaporation increases the concentration and viscosity of the cantharidin solution, and medical practitioners often use the product until it is "too thick" to apply. This changing concentration results in variable potency and presents challenges for the practitioners, which can lead to patients receiving more drug than is clinically necessary and excessive blistering.

- **Inconsistent Purity and Lack of Controlled Product.** Without a standardized formulation, current practice introduces unnecessary risk to the patient and possible exposure to unidentified impurities and contaminants. According to the FDA, compounded cantharidin's purity could be highly variable, and the impurities are likely to be insect extracts, solvents or residual pesticides.

- **Unavailability.** It is illegal to import formulated cantharidin and the legal pathway to obtain cantharidin is through compounding of unstandardized, poorly controlled product. Additionally, while compounded cantharidin treatment may be available in private practice offices, it is generally not available in hospitals and academic settings, which may require an FDA-approved product.

- **Inconvenient and Variable Administration.** The nature of the compounded cantharidin, coupled with the traditional application strategy of using the wooden stick part of a cotton-tipped swab, can lead to patients receiving more drug than is clinically necessary to achieve the desired effect. Treatment is further complicated by the inability to clearly identify where the drug has been applied.

- **Lack of Drug Reimbursement.** Since compounded cantharidin is not approved by the FDA, it is not eligible for drug reimbursement.

Molluscum

Background of Molluscum

Molluscum is a viral infection of the skin caused by a DNA pox virus. It produces small, raised, flesh-colored papules and papulovesicles, each one to four millimeters in diameter, which typically have an umbilicated, or dimpled, center. The lesions may occur anywhere on the body including the face, neck, arms, legs, abdomen and genital area, alone or in groups. Molluscum typically presents with 10 to 30 lesions, which, if left untreated, persist for an average of 13 months, with some cases remaining unresolved for more than two years. Molluscum lesions may itch or become irritated and picking or scratching the lesions may lead to secondary bacterial infection or scarring.

Molluscum has a 5% to 11% prevalence rate in children and the greatest incidence in individuals aged one to 14 years old. Accordingly, we estimate this represents a total addressable U.S. market of over $1 billion. We believe that the molluscum prevalence rate in the European Union is at least as high as in the United States. Molluscum is spread readily by autoinoculation and by person-to-person contact, including often between siblings and friends. This spreading, combined with the development of additional lesions in neighboring sites during this time, often leads to anxiety and social challenges for the patients and has been shown to negatively impact quality of life.

Current Treatments for Molluscum and Their Limitations

There are currently no FDA-approved medications for the treatment of molluscum and there is no established standard of care, resulting in an undertreated patient population. VP-102, if approved, will compete against various treatments, but many of these treatments have problems that limit broad use such as recurrence, scarring, lack of availability, safety concerns and pain. In particular, the potential for scarring and pain makes many of these treatments unsuitable for children. These treatments include:

- **Topical products**: applying various acids, creams or blistering solutions, such as compounded cantharidin, to destroy the lesions. While compounded cantharidin is widely recognized by dermatologists, it is not FDA-approved, not readily available, and often not produced in accordance with GMP. In addition, the formulation and administration of cantharidin is not standardized and is poorly controlled.

- **Cryotherapy**: freezing the lesions with liquid nitrogen. Cryotherapy can be painful and can lead to scarring, making it unsuitable for use in children.

- **Curettage**: using a curette, or a surgical instrument with a scoop at the tip, to scrape the lesions from the skin. However, this procedure can also be painful and lead to scarring.

- **Laser surgery**: applying a laser to target and destroy the lesions. Pain, cost and lack of availability are major limiting factors, therefore, laser surgery is typically not used for the treatment of molluscum.

- **Off-label drugs**: prescribing retinoids, antiviral medicines, or immune modulating therapies such as imiquimod have been used in attempts to speed resolution of molluscum lesions. However, there is limited information to show these are effective treatments. For example, imiquimod has failed in two Phase 3 clinical trials for molluscum and has known side effects.

- **Natural remedies**: applying natural oils with antimicrobial properties, such as tea tree oil. However, these treatments have unproven efficacy, are minimally regulated, can be painful or irritating on application and may cause allergic reactions.

Our Solution: VP-102 for the Treatment of Molluscum

We are developing VP-102 as a proprietary drug-device combination of a novel 0.7% w/v topical solution of cantharidin administered through our single-use precision applicator. VP-102 has the potential to be a first-in-class treatment for molluscum that we believe will address many of the shortcomings associated with current therapies, including pain and discomfort, scarring and lack of effectiveness.

We have designed VP-102 to address the significant limitations of current compounded cantharidin formulations for the treatment of molluscum, with respect to safety, purity, efficacy, stability and ease of administration. VP-102 contains the first GMP-controlled formulation of cantharidin with a defined pharmaceutical batch process and an API that is greater than 99% pure.

Our proprietary single-use applicator allows for precise application to each lesion. Our applicator contains a sealed glass ampule providing long-term room temperature stability without the changes in concentration due to evaporation seen in compounded formulations.

Benefits of VP-102

- **Non-invasive and least painful upon application.** VP-102 is designed to result in little to no pain upon application in contrast to invasive treatment options such as cryosurgery, curettage, and laser surgery. This is especially important when treating younger children. According to *Fitzpatrick's Dermatology in General Medicine*, patients generally find cantharidin as the least painful therapy for the treatment of molluscum.

- **GMP-compliant product with improved stability and purity.** VP-102 has the potential to be the first cantharidin product compliant with GMP standards with a defined pharmaceutical batch process and an API that is greater than 99% pure. Our applicator contains a sealed glass ampule providing long-term room temperature stability without the changes in concentration due to evaporation seen in compounded formulations.

- **Compelling evidence of safety**. In February 2015, the FDA concluded based on then available clinical information, cantharidin's toxicities were no worse and sometimes less severe than other destructive treatments available for molluscum and warts. With respect to VP-102, no severe

adverse events or unexpected treatment related adverse events have been observed in our clinical trials to date and treatment has been well tolerated. Other safety features include a proprietary self-sealing applicator that is designed to prevent an increase in concentration of cantharidin and the inclusion of a bittering agent mitigating oral ingestion by young children.

- **Potential to increase physician efficiency.** VP-102 is being developed as a proprietary drug-device combination for administration designed to ensure a more precise and efficient application compared to application with the wooden stick part of a cotton-tipped swab, which requires physicians to apply cantharidin multiple times from jar to lesion. Additionally, VP-102 contains a visualization agent enabling practitioners to see which lesions have been treated. As a result, VP-102, if approved, may allow for administration by any trained medical professional, not just the physician, saving valuable time in office for the provider as well as patients and their families.

- **Potential to be the first FDA-approved product for the treatment of molluscum.** There are currently no FDA-approved drugs for the treatment of molluscum and, if approved, VP-102 will be eligible for drug reimbursement and has the potential to become the standard of care.

Clinical Development for Molluscum

We submitted an IND for VP-102 for the treatment of molluscum to the FDA in March 2017 and have one ongoing Phase 2 clinical trial under this IND, which we refer to as the Innovate Trial. We have completed one Phase 2 clinical trial in molluscum using our proprietary topical solution of cantharidin administered with the wooden stick part of a cotton-tipped swab, which we refer to as the Pilot Trial. In both the Pilot Trial and the ongoing Innovate Trial, our proprietary topical solution of cantharidin has been observed to be well tolerated, with no severe adverse events or unexpected treatment related adverse events to date. We have also obtained the exclusive full right of reference to one Phase 2 clinical trial with compounded cantharidin, which we refer to as the Compounded Trial.

In September 2017, following the completion of our Pilot Trial, we held an End-of-Phase 2 meeting with the FDA to discuss our VP-102 development program. At the meeting and in subsequent correspondence with the FDA, alignment was reached regarding the primary endpoint and other key aspects of the protocols for our Phase 3 clinical trials. The FDA agreed that the design and planned analysis of the trial adequately addresses the objectives necessary to support a regulatory submission. In the first quarter of 2018, we initiated two identical, randomized, double-blinded, multicenter, placebo-controlled Phase 3 clinical trials of VP-102 for the treatment of molluscum, CAMP-1 and CAMP-2. CAMP-1 is being conducted under an SPA with the FDA. We expect to report top-line results from these Phase 3 trials in the first half of 2019. If the results from these trials are favorable, we plan to submit an NDA to the FDA for the approval of VP-102 in 2019.

Below is a summary of our clinical development for the indication of molluscum.

Trial and Status	Formulation and Application Method	Trial Design	Trial Objectives
Phase 3 Clinical Trials (CAMP-1 and CAMP-2) Ongoing	VP-102	• Randomized, double-blinded, multicenter, placebo-controlled • Safety and efficacy evaluated every 21 days for up to 4 applications	• To evaluate the efficacy of dermal application of VP-102 relative to placebo for complete clearance at day 84 • To assess the safety and tolerability of VP-102

Trial and Status	Formulation and Application Method	Trial Design	Trial Objectives
Phase 2 Innovate Trial Ongoing	VP-102	• Open-label, single-center • 24-hour treatment • Blood draws in patients with more than 21 lesions for evaluating PK • Safety and efficacy evaluated every 21 days for up to four applications • Impact of quality of life assessed via the CDLQI • Duration: 12 weeks	• To determine any possible systemic exposure from a single 24-hour application of VP-102 • To confirm safety and efficacy with applicator • To assess impact on quality of life
Phase 2 Pilot Trial (n=30) Completed in September 2017	Our proprietary formulation of cantharidin used in VP-102, applied with the wooden stick part of a cotton-tipped swab	• Open-label, single-center • Six hour and 24 hour treatment cohorts • Safety and efficacy evaluated every 21 days for up to four applications • Impact of quality of life assessed via the CDLQI • Duration: 12 weeks	• To evaluate safety and efficacy and determine optimal treatment duration • To assess impact on quality of life • To evaluate if our proprietary formulation used in VP-102 is similar in safety and efficacy to a historically used compounded formulation
Phase 2 Compounded Trial (n=94) Completed in January 2016	Compounded cantharidin, applied with the wooden stick part of a cotton-tipped swab	• Randomized, double-blind, placebo-controlled, single center with open-label extension • Duration: six weeks followed by open-label extension until patients were clear of all lesions	• To evaluate safety and efficacy over two treatment cycles

Ongoing Phase 3 Clinical Trials—CAMP-1 and CAMP-2

We are conducting two randomized, double-blind, multicenter, placebo-controlled pivotal trials to evaluate the safety and efficacy of VP-102 in patients two years and older with molluscum. We applied for and have received SPA designation for CAMP-1. While we did not apply for SPA designation for CAMP-2, we have designed that trial to be identical to CAMP-1. These trials will be conducted at approximately 15 clinical sites each in the United States and will enroll up to 250 patients in each trial. Patients will be randomized to receive either VP-102 or placebo in a 3:2 ratio. The primary objective of the trials is to evaluate the efficacy of dermal application of VP-102 relative to placebo, when treated once every 21 days for up to four applications, by assessing the proportion of patients achieving complete clearance of all treatable molluscum lesions at day 84 (visit 5). Treatable lesions are generally defined as lesions that can be safely treated by the investigator and are more than one centimeter from the eyelid margins or any mucosal surface.

The secondary objectives of the trials are to assess the safety and tolerability of VP-102, by assessing adverse events including expected local skin reactions, physical examinations, and concomitant medications at end of the trial, compared to baseline. Secondary efficacy measures include evaluating of the efficacy of VP-102 relative to placebo by assessing the proportion of patients achieving complete clearance of all treatable molluscum lesions at day 21 (visit 2), day 42 (visit 3) and day 63 (visit 4).

We expect to report top-line results from these Phase 3 trials in the first half of 2019. If the results of these trials are favorable, we intend to submit an NDA for VP-102 for the treatment of molluscum to the FDA in 2019.

Phase 2 Clinical Trial—Innovate Trial

We have an ongoing open-label Phase 2 clinical trial, which we refer to as the Innovate Trial. This trial utilizes VP-102 in patients two years and older with molluscum. This trial is being conducted at a single site in the United States and will enroll up to 40 patients. The primary objectives of the trial are to evaluate potential systemic exposure in 16 patients with severe disease following topical administration of VP-102 and to evaluate the safety and efficacy of dermal application of VP-102 for up to 24 hours when treatable lesions are treated once every 21 days for up to four applications. It is expected that at least 16 of the 40 patients will participate in an exposure portion of the trial to evaluate potential systemic exposure. Only patients with equal to or greater than 21 lesions are eligible for the exposure portion of the trial. Patients with 20 or fewer molluscum lesions have been enrolled in the trial to expand the number of patients and to evaluate clearance rates across all severity ranges of molluscum.

Phase 2 Clinical Trial—Pilot Trial

In 2016, we conducted an open-label, Phase 2 clinical trial, which we refer to as the Pilot Trial, to confirm that our proprietary cantharidin formulation was similar in safety and efficacy profile to a historically used 0.7% cantharidin formulation and to determine the optimal treatment regimen and estimate power for planned pivotal trials. The trial enrolled 30 patients at a single center and was completed in September 2017. The trial utilized a single-use screw-top vial of our proprietary 0.7% cantharidin formulation, with application via the wooden part of a cotton-tipped swab, which is the method of application historically used with compounded cantharidin. The patients were divided into two cohorts, with the first cohort instructed to wash off the treatment after a six-hour exposure and the second cohort washing off the product after 24-hour exposure. Patients were treated every three weeks for up to four treatments. Safety and efficacy measures were evaluated every three weeks. Primary efficacy measures were the percentage of patients who achieved complete clearance by day 42 (visit 3) and day 84 (visit 5). Secondary efficacy measures included a quality of life assessment, as measured by the CDLQI score, and the percentage of patients who achieved clearance of at least 90% of their lesions with comparison to the efficacy data obtained with compounded cantharidin. The Children's Dermatology Life Quality Index, or CDLQI, scale is a validated tool for measuring the impact of skin disease on quality of life for

patients five to sixteen years of age and ranges from a score of 0 to 30. Lower CDLQI scores indicate lower impairment of a patient's quality of life.

In the Pilot Trial, our proprietary cantharidin formulation was applied to over 1,700 molluscum lesions in 30 patients, and was observed to be well tolerated, with no serious adverse events or unexpected treatment related adverse events recorded. Treatment-related adverse events were consistent with the known mechanism of action of cantharidin and included, among other things, blistering, redness, itchiness, temporary pigment changes and transient minor pain (controllable with an over-the-counter pain reliever) following application. Further, no blistering distal to the sites of treatment or scarring was observed. There were no cases of secondary infection, impetigo, cellulitis, or lymphangitis related to treatment.

The trial's first cohort investigated a six-hour treatment duration. Fourteen patients were enrolled in this cohort and 13 patients completed the trial. Of these 13 patients, six showed complete clearance on or before day 84 (visit 5) (46% complete clearance rate).

The second cohort investigated a 24-hour treatment duration. Sixteen patients were enrolled in this cohort and 12 completed the trial. Of these 12 patients, five showed complete clearance on or before day 84 (visit 5) (42% complete clearance rate).

In the per-protocol group, the combined mean baseline lesion count was 23.0 and the combined mean lesion count at the end of trial was 6.8. Other efficacy measures included lesion count and the CDLQI score. The CDLQI score went from a combined average burden of 3.9 at baseline to 0.38 at the end of trial. While the majority of patients went to a CDLQI score of 0 when completely clear of their disease, patients felt an improvement in quality of life even if only partially cleared, supporting the idea that even lesion reduction is meaningful to patients.

Although the trial did not include a placebo control, based on reported results from two failed Phase 3 clinical trials evaluating imiquimod, a product candidate that was being evaluated for the treatment of molluscum, we estimate that, at the day 84 (visit 5) endpoint, patients receiving placebo would be expected to demonstrate complete clearance at a rate of 18% (42 patients of 232), a rate that was significantly less than that observed in our trials. However, caution must be used when comparing data from different studies that involved different study conditions and/or designs.

Overall, we believe these results support our conclusion that, when applied with the wooden stick part of a cotton-tipped swab, our proprietary cantharidin formulation had a comparable evidence of efficacy and safety in the trial to that of historically used compounded formulations of cantharidin when both are applied using a wooden part of a cotton-tipped swab.

Common Warts

We are also developing VP-102 for the treatment of common warts. Currently, there are no FDA-approved products indicated for the treatment of common warts. We believe that cantharidin's role as a widely-recognized and effective blistering agent for the treatment of skin lesions, coupled with our VP-102's safety and efficacy data in clinical trials for the treatment of molluscum and convenient ease of administration, will allow VP-102 to address many of the shortcomings associated with current therapies. We are currently enrolling 20 patients in a Phase 2 clinical trial evaluating both safety and efficacy of VP-102 for the treatment of common warts. We believe the results of this trial will inform the clinical design and statistical powering of future clinical trials.

Background of Common Warts

Common warts are cutaneous manifestations of the human papillomavirus, or HPV. Common warts are contagious, and while they typically resolve spontaneously with time, they can persist for years and are highly

refractory to treatment. Approximately two million people seek treatment for common warts in the United States annually, and we estimate the total addressable U.S. market to be approximately $1.5 billion. In the United States, approximately 50% of the patients who seek treatment for common warts are children, as warts are increasingly common in childhood, reaching a peak in prevalence in the teenage years. Approximately 60% of common wart patients are treated by dermatologists and 25% are treated by pediatricians. We believe that the common wart patient opportunity in the European Union is at least as large as that in the United States.

There are numerous reasons why patients desire treatment. Common warts can cause considerable pain or discomfort, interfering with work or daily activities and are frequently considered cosmetically unsightly particularly if they occur on visually prominent areas like the face, neck, arms or hands. There is considerable social stigma associated with visible warts.

Current Treatments for Common Warts and Their Limitations

There are currently no FDA-approved products indicated for the treatment of common warts. Over-the-counter products, often containing salicylic acid, are the most common therapy. However, these products are slow to work, marginally effective and a frequent cause for multiple physician consultations. When patients seek a healthcare provider, treatment options include cryotherapy, surgical excision, prescription topicals such as retinoids and immunomodulators, cytotoxin injections, lasers and compounded cantharidin.

While multiple modalities are available for the treatment of common warts, compounded cantharidin has the same limitations for common warts as with molluscum, and none of the other treatments are uniformly effective. Salicylic acid therapy requires daily application and can cause a painful burning sensation. Cryotherapy has limited efficacy, with variability in results, and can cause severe pain, rendering it an unsuitable treatment option for sensitive areas and younger children. In addition, many of these therapies have the potential to leave scars.

Our Solution: VP-102 for the Treatment of Common Warts

We are also developing VP-102 for the treatment of common warts. Published studies and clinical use provide support for cantharidin as a safe and effective treatment for common warts. We believe that VP-102 has the potential to address many of the shortcomings associated with current therapies, including pain and discomfort, scarring, and lack of effectiveness. In addition, we believe VP-102's convenient ease of administration will differentiate it from existing alternative unapproved therapies.

We plan to enroll up to 20 patients in a Phase 2 clinical trial of VP-102 for the treatment of common warts, which has both safety and efficacy endpoints. We believe the results of this trial will inform the clinical design and statistical powering of future clinical trials.

In the trial, VP-102 will be applied once every 14 days for up to four applications to common warts on patients two years and older. The primary endpoint of the trial will be the proportion of patients achieving complete clearance of all treatable warts at the end of the trial. We also plan to assess the safety and tolerability of VP-102 by evaluating adverse events, including expected local skin reactions, conducting physical examinations, and assessing concomitant medication use at the end of trial visit compared to baseline.

Trial and Status	Formulation and Application Method	Trial Design	Trial Objectives
Phase 2 Trial Ongoing	VP-102	• Open-label, single-center, 24-hour treatment under occlusive tape	• To evaluate safety and efficacy over four treatments (six weeks + six week follow up)

We expect to complete enrollment in the Phase 2 clinical trial in mid-2018 and to report top-line results from this trial by the end of 2018. If the results of our Phase 2 clinical trial are favorable, we intend to initiate registration-enabling trials in 2019.

Additional Indications for VP-102

We are currently evaluating and prioritizing other indications for VP-102, including actinic keratoses, genital warts, subungual warts, flat warts and seborrheic keratoses. We believe VP-102 may have the potential to address these skin diseases due to their similar nature to molluscum and common warts. Furthermore, we are evaluating and intend to further explore the use of cantharidin for other skin diseases.

VP-103 for the Treatment of Plantar Warts

We also intend to develop our second cantharidin-based product candidate, VP-103, for the treatment of plantar warts, which are warts located on the bottom of the foot. An estimated one-third of the approximately 4.1 million patient visits for all types of warts are for the treatment of plantar warts. To date, plantar warts have been difficult to treat, as they are refractory and available treatments often lead to both pain and scarring. We expect to conduct IND-enabling studies for VP-103 and to submit an IND to the FDA by the end of 2019.

Manufacturing

We do not have any manufacturing facilities. We have been relying on third parties for the manufacture of the products for preclinical studies and clinical trials, and will likely continue to rely on these third parties in the near term for the commercial manufacture of the drug products if they are approved during the initial commercial phase. Manufacturing of the API for our product candidates requires a raw material that is derived from a natural source.

Our contract manufacturers and primary packaging vendor are FDA-registered establishments and have a history of supplying products to the pharmaceutical industry.

We have manufactured both the API as well as the drug product at batch sizes that should be indicative of commercial scale processing capability. We are confident of the ability to scale both to commercial size as they employ equipment that is routinely used in the pharmaceutical industry and the processes are well understood. Given the nature of both the API as well as several of the excipients, special handling will be required to minimize risks to personnel during processing. Analytical testing methods for both the API as well as the finished drug product have been developed and satisfactorily qualified to enable release of clinical materials for human use. It is expected that these methods will prove appropriate for release of commercial product with minimal additional effort.

Our proprietary individual applicator and its parts are fabricated using common methods and materials and we currently plan to have our applicators built using semi-custom equipment performing well established automated assembly techniques.

Commercialization

We intend to commercialize VP-102, or any other product candidates that we may successfully develop, in the United States by building a specialized sales organization focused on pediatric dermatologists, dermatologists and select pediatricians. We believe a scientifically oriented, customer-focused team of approximately 50 to 60 sales representatives would allow us to reach the approximately 400 pediatric dermatologists and 9,000 dermatologists in the United States with the highest potential for using VP-102. In the future, we may develop and commercialize VP-102 for additional geographic regions, independently or with a strategic partner. We intend to seek drug product reimbursement for VP-102. We believe dermatologists tend to

be particularly focused on the safety of pharmaceutical products because, while skin diseases can have profound effects on patients' quality of life, few are life-threatening. As a result, we believe that dermatologists, as well as their patients, often prefer to use topical treatments when possible to limit the risk of systemic side effects. Dermatologists also tend to place a high level of emphasis on products that are easy to use because they often manage high volumes of patients. We believe this also contributes to a general preference for topical treatments. Finally, in our experience, dermatologists tend to engage with sales and medical affairs personnel from the pharmaceutical industry regarding the scientific evidence supporting dermatology products and the challenges experienced by physicians and patients in the use of these products. Dermatologists often rely on trusted relationships with scientifically oriented, customer-focused sales representatives who can provide them with the necessary information to support their use of appropriate treatments.

Competition

The pharmaceutical industry is subject to rapidly advancing technologies, intense competition and a strong emphasis on proprietary products. We face potential competition from many different sources, including major pharmaceutical, specialty pharmaceutical and biotechnology companies, compounding facilities, academic institutions, governmental agencies and public and private research institutions. Any product candidates that we successfully develop and commercialize will compete with existing treatments and new treatments that may become available in the future.

The key competitive factors affecting the success of VP-102, if approved, are likely to be its efficacy, safety, convenience, pricing and stability. With respect to VP-102 for the treatment of molluscum, we will be primarily competing with therapies such as other topical products, curettage, cryotherapy, laser surgery, natural oils, off-label drugs, natural remedies and compounded unstandardized cantharidin. Under Section 503A of the FDCA, if VP-102 is approved, compounded topical cantharidin products with the same, similar or an easily substitutable dosage strength would be considered essentially copies of VP-102 and may not be compounded regularly or in inordinate amounts, subject to certain limited individual exceptions. These exceptions include if there is a difference between the compounded product and VP-102 that is made for an individual patient, and a prescribing practitioner determines produces a significant difference for that patient. In addition, pursuant to Section 503B of the FDCA, once VP-102 is approved, compounding facilities registered as outsourcing facilities would not be able to compound cantharidin products, unless there is a difference from VP-102 that produces a clinical difference for an individual patient, as determined by a prescribing practitioner. With respect to common warts, we will primarily be competing with over-the-counter products, cryotherapy, curettage, laser surgery, or other off-label therapies. There are currently no FDA-approved prescription pharmaceutical therapies for the treatment of molluscum or common warts.

We are aware of several other product candidates in earlier stages of development as potential treatments for the indications we intend to target. Veloce Biopharma, Leo Pharma and Novan have initiated clinical trials with different programs in molluscum. There are a number of companies conducting late-stage clinical trials for common warts, including Aclaris Therapeutics and Cutanea Life Sciences. In addition, other drugs have been used off label as treatments for molluscum and common warts.

Intellectual Property

Our commercial success depends in part on our ability to obtain and maintain proprietary protection for VP-102 and our proprietary applicator and any of our future product candidates, medical devices, synthetic methodologies, novel discoveries, drug development technologies and know-how; to operate without infringing on or otherwise violating the proprietary rights of others; and to prevent others from infringing or otherwise violating our proprietary rights. Our policy is to seek to protect our proprietary position by, among other methods, filing U.S. and foreign patent applications related to our product candidate and other proprietary technologies, inventions and improvements that are important to the development and implementation of our business. We also rely on trademarks, trade secrets, know-how, continuing technological innovation, and potential in-licensing opportunities to develop and maintain our proprietary position.

While we seek broad coverage under our pending patent applications, our patent applications do not include any claims drawn to the active pharmaceutical agent cantharidin *per se* or for the broad use of our API alone for the treatment of warts or molluscum, although we have filed patent applications on our cantharidin preparations, cantharidin formulations, dosing regimens, methods of preparation including methods of synthesis, and methods of use. Despite these patent filings, there is always a risk that modification of the specific formulation, manufacturing process, method of application and/or specific method of use may allow a competitor to avoid infringement claims. In addition, patents, if granted, will expire, and we cannot provide any assurance that any patents will be issued from our pending or any future applications.

As of March 2018, we have nationalized three patent applications for utility patents in the United States and various foreign jurisdictions, four U.S. provisional applications, and one patent application for a design patent relating to VP-102, our proprietary applicator, and other inventions related to VP-102. Our patent applications related to VP-102 and our proprietary applicator include proposed claims relating to (i) methods for the synthesis of cantharidin, (ii) our specific formulations and preparations of VP-102, (iii) methods for purifying cantharidin, (iv) methods for detecting impurities in cantharidin, (v) the design of our proprietary applicator, including both the general design and specific design elements, (vi) claims related to safety features included in the VP-102 formulation, including colorants and bittering agents, and (vii) the method of administration of VP-102 for the treatment of skin lesions. Excluding any patent term adjustment and patent term extension, utility patents to issue from these patent applications are projected to expire between 2034 and 2039. The design patent to issue from the design patent application will expire fifteen years from the date of issuance. We cannot provide any assurance as to whether any patents will be issued from these patent applications or, if any patents do issue, the scope of the claims that will be allowed.

Individual patents extend for varying periods depending on the date of filing of the patent application or the date of patent issuance and the legal term of patents in the countries, in which they are obtained. Generally, patents issued from regularly filed applications in the United States are granted a term of 20 years from the earliest effective filing date. In addition, in certain instances, a patent term can be adjusted to recapture a portion of the United States Patent and Trademark Office, or the USPTO, delay in issuing the patent, and extended to recapture a portion of the patent term effectively lost as a result of the FDA regulatory review period of the drug covered by the patent. However, as to the FDA component, the restoration period cannot be longer than five years, the total patent term including the restoration period must not exceed 14 years following FDA approval of the drug, and the extension may only apply to one patent that covers the approved drug (and to only those patent claims covering the approved drug or a method for using it). There can be no assurance that any such patent term adjustment or extension will be obtained. The duration of foreign patents varies in accordance with provisions of applicable local law, but typically is also 20 years from the earliest effective filing date. However, the actual protection afforded by a patent varies on a product-by-product basis, from country to country and depends upon many factors, including the type of patent, the scope of its coverage, the availability of regulatory-related extensions, the availability of legal remedies in a particular country, and the validity and enforceability of the patent.

Furthermore, we rely upon trade secrets, know-how, and continuing technological innovation to develop and maintain our competitive position. We seek to protect our proprietary information, in part, using confidentiality agreements with our commercial partners, collaborators, employees, and consultants and invention assignment agreements with our employees. We also have confidentiality agreements or invention assignment agreements with our commercial partners and selected consultants. These agreements are designed to protect our proprietary information and, in the case of the invention assignment agreements, to grant us ownership of technologies that are developed through a relationship with a third party. These agreements may be breached, and we may not have adequate remedies for any such breach. In addition, our trade secrets may otherwise become known or be independently discovered by competitors. To the extent that our commercial partners, collaborators, employees, and consultants use intellectual property owned by others in their work for us, disputes may arise as to the rights in related or resulting know-how and inventions.

Government Regulation and Product Approval

Government authorities in the United States, at the federal, state and local levels, and in other countries, extensively regulate, among other things, the research, development, testing, manufacture, packaging, storage, recordkeeping, labeling, advertising, promotion, distribution, marketing, import and export of pharmaceutical products, such as those we are developing. We, along with third-party contractors, will be required to navigate the various preclinical, clinical and commercial approval requirements of the governing regulatory agencies of the countries in which we wish to conduct studies or seek approval of our product candidates. The processes for obtaining regulatory approvals in the United States and in foreign countries, along with subsequent compliance with applicable statutes and regulations, require the expenditure of substantial time and financial resources.

United States Government Regulation

In the United States, the FDA regulates drugs under the FDCA and its implementing regulations. The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state, local and foreign statutes and regulations requires the expenditure of substantial time and financial resources. Failure to comply with the applicable United States requirements at any time during the drug development process, approval process or after approval, may subject an applicant to a variety of administrative or judicial sanctions, such as the FDA's refusal to approve pending new drug applications, or NDAs, withdrawal of an approval, imposition of a clinical hold, issuance of warning or untitled letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, refusals of government contracts, restitution, disgorgement or civil or criminal penalties.

The process required by the FDA before a drug may be marketed in the United States generally involves:

- completion of preclinical laboratory tests, animal studies and formulation studies in compliance with the FDA's good laboratory practice, or GLP, regulations;
- submission to the FDA of an IND, which must become effective before human clinical trials may begin;
- approval by an independent institutional review board, or IRB, at each clinical site before each trial may be initiated;
- performance of adequate and well-controlled clinical trials in accordance with good clinical practice, or GCP, requirements to establish the safety and efficacy of the proposed drug for each indication;
- submission to the FDA of an NDA;
- satisfactory completion of an FDA advisory committee review, if applicable;
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities at which the product is produced to assess compliance with cGMP requirements, and to assure that the facilities, methods and controls are adequate to preserve the drug's identity, strength, quality and purity;
- satisfactory completion of an FDA inspection of selected clinical sites to assure compliance with GCPs and the integrity of the clinical data;
- payment of user fees and
- FDA review and approval of the NDA.

VP-102 is designed to be delivered to patients via a proprietary applicator. In the United States, products composed of components that would normally be regulated by different centers at the FDA are known as combination products. Typically, the FDA's Office of Combination Products assigns a combination product to a specific Agency center as the lead reviewer. The FDA determines which center will lead a product's review based upon the product's primary mode of action. Depending on the type of combination product, its approval, clearance or licensure may usually be obtained through the submission of a single marketing application. We anticipate that VP-102 will be regulated as a drug, and that the FDA will permit a single regulatory submission seeking approval of VP-102 with the applicator. However, the FDA sometimes will require separate marketing applications for individual constituent parts of the combination product which may require additional time, effort, and information, and we cannot be certain that the FDA would not require independent clearance or approval for the proprietary applicator. Even when a single marketing application is required for a combination product, such as an NDA for a combination pharmaceutical and device product, both the FDA's Center for Drug Evaluation and Research and the FDA's Center for Devices and Radiological Health may participate in the review. An applicant will also need to discuss with the Agency how to apply certain premarket requirements and post-marketing regulatory requirements, including conduct of clinical trials, adverse event reporting and good manufacturing practices, to their combination product.

Preclinical Studies

Preclinical studies include laboratory evaluation of product chemistry, toxicity and formulation, as well as animal studies to assess potential safety and efficacy. An IND sponsor must submit the results of the nonclinical tests, together with manufacturing information, analytical data and any available clinical data or literature, among other things, to the FDA as part of an IND. Some nonclinical testing may continue even after the IND is submitted. An IND automatically becomes effective and a clinical trial proposed in the IND may begin 30 days after receipt by the FDA, unless before that time the FDA raises concerns or questions related to one or more proposed clinical trials and places the clinical trial on a clinical hold. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. As a result, submission of an IND may not result in the FDA allowing clinical trials to commence.

Clinical Trials

Clinical trials involve the administration of the investigational new drug to human subjects under the supervision of qualified investigators in accordance with GCP requirements, which include the requirement that all research subjects provide their informed consent in writing for their participation in any clinical trial. Clinical trials are conducted under protocols detailing, among other things, the objectives of the trial, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. A protocol for each clinical trial and any subsequent protocol amendments must be submitted to the FDA as part of the IND. In addition, an IRB at each institution participating in the clinical trial must review and approve the plan for any clinical trial before it commences at that institution, and the IRB must continue to oversee the clinical trial while it is being conducted. Information about certain clinical trials must be submitted within specific timeframes to the National Institutes of Health, or NIH, for public dissemination on their ClinicalTrials.gov website.

Human clinical trials are typically conducted in three sequential phases, which may overlap or be combined. In Phase 1, the drug is initially introduced into healthy human subjects or patients with the target disease or condition and tested for safety, dosage tolerance, absorption, metabolism, distribution, excretion and, if possible, to gain an initial indication of its effectiveness. In Phase 2, the drug typically is administered to a limited patient population to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted diseases and to determine dosage tolerance and optimal dosage. In Phase 3, the drug is administered to an expanded patient population, generally at geographically dispersed clinical trial sites, in well-controlled clinical trials to generate enough data to statistically evaluate the safety and efficacy of the product for approval, to establish the overall risk-benefit profile of the product and to provide adequate information for the labeling of the product.

In some cases, the FDA may condition approval of an NDA for a product candidate on the sponsor's agreement to conduct additional clinical trials after NDA approval. In other cases, a sponsor may voluntarily conduct additional clinical trials post approval to gain more information about the drug. Such post approval trials are typically referred to as Phase 4 clinical trials.

Progress reports detailing the results of the clinical trials must be submitted, at least annually, to the FDA, and more frequently if serious adverse events occur. Phase 1, Phase 2 and Phase 3 clinical trials may not be completed successfully within any specified period, or at all. Furthermore, the FDA or the sponsor may suspend or terminate a clinical trial at any time on various grounds, including a finding that the research subjects are being exposed to an unacceptable health risk. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB's requirements, or if the drug has been associated with unexpected serious harm to patients.

Concurrent with clinical trials, companies usually complete additional animal studies and must also develop additional information about the chemistry and physical characteristics of the product and finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other things, the manufacturer must develop methods for testing the identity, strength, quality and purity of the final product. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over its shelf life.

Marketing Approval

Assuming successful completion of the required clinical testing, the results of the preclinical studies and clinical trials, together with detailed information relating to the product's chemistry, manufacture, controls and proposed labeling, among other things, are submitted to the FDA as part of an NDA requesting approval to market the product for one or more indications. In most cases, the submission of an NDA is subject to a substantial application user fee. Under the Prescription Drug User Fee Act, or PDUFA, guidelines that are currently in effect, the FDA has a goal of ten months from the date of "filing" of a standard NDA for a new molecular entity to review and act on the submission. This review typically takes twelve months from the date the NDA is submitted to the FDA because the FDA has sixty days from receipt to make a decision as to whether the application has been accepted for filing.

In addition, under the Pediatric Research Equity Act of 2003 as amended and reauthored, certain NDAs or supplements to an NDA must contain data that are adequate to assess the safety and effectiveness of the drug for the claimed indications in all relevant pediatric subpopulations, and to support dosing and administration for each pediatric subpopulation for which the product is safe and effective. The FDA may, on its own initiative or at the request of the applicant, grant deferrals for submission of some or all pediatric data until after approval of the product for use in adults, or full or partial waivers from the pediatric data requirements.

The FDA also may require submission of a risk evaluation and mitigation strategy, or REMS, plan to ensure that the benefits of the drug outweigh its risks. The REMS plan could include medication guides, physician communication plans, assessment plans, and/or elements to assure safe use, such as restricted distribution methods, patient registries or other risk minimization tools.

The FDA conducts a preliminary review of all NDAs within the first 60 days after submission, before accepting them for filing, to determine whether they are sufficiently complete to permit substantive review. The FDA may request additional information rather than accept an NDA for filing. In this event, the application must be resubmitted with the additional information. The resubmitted application is also subject to review before the FDA accepts it for filing. Once the submission is accepted for filing, the FDA begins an in-depth substantive review. The FDA reviews an NDA to determine, among other things, whether the drug is safe and effective and

whether the facility in which it is manufactured, processed, packaged or held meets standards designed to assure the product's continued safety, quality and purity.

The FDA may refer an application for a novel drug to an advisory committee. An advisory committee is a panel of independent experts, including clinicians and other scientific experts, that reviews, evaluates and provides a recommendation as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions.

Before approving an NDA, the FDA typically will inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. Additionally, before approving an NDA, the FDA will typically inspect one or more clinical trial sites to assure compliance with GCP requirements.

The testing and approval process for an NDA requires substantial time, effort and financial resources, and each may take several years to complete. Data obtained from preclinical and clinical testing are not always conclusive and may be susceptible to varying interpretations, which could delay, limit or prevent regulatory approval. The FDA may not grant approval of an NDA on a timely basis, or at all.

After evaluating the NDA and all related information, including the advisory committee recommendation, if any, and inspection reports regarding the manufacturing facilities and clinical trial sites, the FDA may issue an approval letter, or, in some cases, a complete response letter. A complete response letter generally contains a statement of specific conditions that must be met in order to secure final approval of the NDA and may require additional clinical or preclinical testing in order for the FDA to reconsider the application. Even with submission of this additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval. If and when those conditions have been met to the FDA's satisfaction, the FDA will typically issue an approval letter. An approval letter authorizes commercial marketing of the drug with specific prescribing information for specific indications.

Even if the FDA approves a product, it may limit the approved indications for use of the product, require that contraindications, warnings or precautions be included in the product labeling, require that post-approval studies, including Phase 4 clinical trials, be conducted to further assess a drug's safety after approval, require testing and surveillance programs to monitor the product after commercialization, or impose other conditions, including distribution and use restrictions or other risk management mechanisms under a REMS, which can materially affect the potential market and profitability of the product. The FDA may prevent or limit further marketing of a product based on the results of post-marketing studies or surveillance programs. After approval, some types of changes to the approved product, such as adding new indications, manufacturing changes, and additional labeling claims, are subject to further testing requirements and FDA review and approval.

Special Protocol Assessment

A sponsor may request an SPA, the purpose of which is to reach agreement with the FDA on the Phase 3 clinical trial protocol design and analysis that will form the primary basis of an efficacy claim. An SPA request must be made before the proposed trial begins, and all open issues must be resolved before the trial begins for an SPA to be approved. If a written agreement is reached, it will be documented in an SPA letter or the minutes of a meeting between the sponsor and the FDA and made part of the administrative record.

Even if the FDA agrees to the design, execution and analyses proposed in protocols reviewed under the SPA process, the FDA may revoke or alter its agreement under the following circumstances:

- public health concerns emerge that were unrecognized at the time of the protocol assessment, or the director of the review division determines that a substantial scientific issue essential to determining safety or efficacy has been identified after testing has begun;
- a sponsor fails to follow a protocol that was agreed upon with the FDA; or
- the relevant data, assumptions, or information provided by the sponsor in a request for SPA change, are found to be false statements or misstatements, or are found to omit relevant facts.

A documented SPA may be modified, and such modification will be deemed binding on the FDA review division, except under the circumstances described above, if the FDA and the sponsor agree in writing to modify the protocol and such modification is intended to improve the study. An SPA, however, does not guarantee that a trial will be successful.

The Hatch-Waxman Amendments

Our current regulatory strategy is to pursue development of VP-102 as a Section 505(b)(2) NDA. As an alternative path to FDA approval for modifications to formulations or uses of drugs previously approved by the FDA, an applicant may submit an NDA under Section 505(b)(2) of the FDCA. Section 505(b)(2) was enacted as part of the Hatch-Waxman Amendments. A Section 505(b)(2) NDA is an application that contains full reports of investigations of safety and effectiveness, but where at least some of the information required for approval comes from studies not conducted by, or for, the applicant and for which the applicant has not obtained a right of reference or use from the person by or for whom the investigations were conducted. This type of application permits reliance for such approvals on literature or on an FDA finding of safety, effectiveness or both for an approved drug product. As such, under Section 505(b)(2), the FDA may rely, for approval of an NDA, on data not developed by the applicant. Therefore, if we can satisfy the conditions required for a Section 505(b)(2) NDA submission, it may eliminate the need for us to conduct some of the preclinical studies or clinical trials for the new product candidate that might otherwise have been required, although the review time is not shortened. The FDA may then approve the new product candidate for the new indication sought by the 505(b)(2) applicant.

Orange Book Listing

In seeking approval for a drug through an NDA, applicants are required to list with the FDA certain patents whose claims cover the applicant's product. Upon approval of an NDA, each of the patents listed in the application for the drug is then published in the FDA's Approved Drug Products with Therapeutic Equivalence Evaluations, known as the Orange Book. Any applicant who files an Abbreviated New Drug Application, or ANDA, seeking approval of a generic equivalent version of a drug listed in the Orange Book or a 505(b)(2) NDA referencing a drug listed in the Orange Book must certify, for each patent listed in the Orange Book for the referenced drug, to the FDA that (1) no patent information on the drug product that is the subject of the application has been submitted to the FDA, (2) such patent has expired, (3) the date on which such patent expires or (4) such patent is invalid or will not be infringed upon by the manufacture, use or sale of the drug product for which the application is submitted. The fourth certification described above is known as a paragraph IV certification. A notice of the paragraph IV certification must be provided to each owner of the patent that is the subject of the certification and to the holder of the approved NDA to which the ANDA refers. The applicant may also elect to submit a "section viii" statement certifying that its proposed label does not contain (or carves out) any language regarding the patented method-of-use rather than certify to a listed method-of-use patent. This section viii statement does not require notice to the patent holder or NDA owner. There might also be no relevant patent certification.

If the reference NDA holder and patent owners assert a patent challenge directed to one of the Orange Book listed patents within 45 days of the receipt of the paragraph IV certification notice, the FDA is prohibited

from approving the application until the earlier of 30 months from the receipt of the paragraph IV certification expiration of the patent, settlement of the lawsuit, or a decision in the infringement case that is favorable to the applicant. Even if the 45 days expire, a patent infringement lawsuit can be brought and could delay market entry, but it would not extend the FDA-related 30-month stay of approval.

The ANDA or 505(b)(2) application also will not be approved until any applicable non-patent exclusivity listed in the Orange Book for the branded reference drug has expired. Specifically, the holder of the NDA for the listed drug may be entitled to a period of non-patent exclusivity, during which the FDA cannot approve an ANDA or 505(b)(2) application that relies on the listed drug. For example, a pharmaceutical manufacturer may obtain five years of non-patent exclusivity upon NDA approval of an NCE, which is a drug that contains an active moiety that has not been approved by FDA in any other NDA. An "active moiety" is defined as the molecule or ion responsible for the drug substance's physiological or pharmacologic action. During the five-year exclusivity period, the FDA cannot accept for filing any ANDA seeking approval of a generic version of that drug or any 505(b)(2) NDA for the same active moiety and that relies on the FDA's findings regarding that drug, except that FDA may accept an application for filing after four years if the follow-on applicant makes a paragraph IV certification. This exclusivity period may be extended by an additional six months if certain requirements are met to qualify the product for pediatric exclusivity, including the receipt of a written request from the FDA that we conduct certain pediatric studies, the submission of study reports from such studies to the FDA after receipt of the written request and satisfaction of the conditions specified in the written request.

Post-Approval Requirements

Drugs manufactured or distributed pursuant to FDA approvals are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to recordkeeping, periodic reporting, product sampling and distribution, advertising and promotion and reporting of adverse experiences with the product. After approval, most changes to the approved product, such as adding new indications, manufacturing changes or other labeling claims, are subject to further testing requirements and prior FDA review and approval. There also are continuing annual program fee requirements for any marketed products.

Even if the FDA approves a product, it may limit the approved indications for use of the product, require that contraindications, warnings or precautions be included in the product labeling, including a boxed warning, require that post-approval studies, including Phase 4 clinical trials, be conducted to further assess a drug's safety after approval, require testing and surveillance programs to monitor the product after commercialization, or impose other conditions, including distribution restrictions or other risk management mechanisms under a REMS, which can materially affect the potential market and profitability of the product. The FDA may prevent or limit further marketing of a product based on the results of post-marketing studies or surveillance programs.

In addition, drug manufacturers and other entities involved in the manufacture and distribution of approved drugs are required to register their establishments with the FDA and state agencies, and are subject to periodic unannounced inspections by the FDA and these state agencies for compliance with cGMP requirements. Changes to the manufacturing process are strictly regulated and often require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from cGMP and impose reporting and documentation requirements upon the sponsor and any third-party manufacturers that the sponsor may decide to use. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain cGMP compliance.

Once an approval is granted, the FDA may withdraw the approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in mandatory revisions to the approved labeling to add new safety information; imposition of post-market studies or

clinical trials to assess new safety risks; or imposition of distribution or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of the product, complete withdrawal of the product from the market or product recalls;
- fines, warning letters or holds on post-approval clinical trials;
- refusal of the FDA to approve pending NDAs or supplements to approved NDAs, or suspension or revocation of product approvals;
- product seizure or detention, or refusal to permit the import or export of products; or
- injunctions or the imposition of civil or criminal penalties.

The FDA strictly regulates marketing, labeling, advertising and promotion of products that are placed on the market. Drugs may be promoted only for the approved indications and in accordance with the provisions of the approved label, although physicians, in the practice of medicine, may prescribe approved drugs for unapproved indications. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses, and a company that is found to have improperly promoted off-label uses may be subject to significant liability.

In addition, the distribution of prescription pharmaceutical products is subject to the Prescription Drug Marketing Act, or PDMA, which regulates the distribution of drugs and drug samples at the federal level, and sets minimum standards for the registration and regulation of drug distributors by the states. Both the PDMA and state laws limit the distribution of prescription pharmaceutical product samples and impose requirements to ensure accountability in distribution.

Regulation of Compounding Pharmacies

Compounding is a practice in which a licensed pharmacist, a licensed physician, or in the case of an outsourcing facility, a person under the supervision of a licensed pharmacist, combines, mixes, or alters ingredients of a drug to create a medication tailored to the needs of an individual patient. Although we are not engaged in compounding, the active pharmaceutical ingredient in our product candidate VP-102 has historically been used in the compounding of topical pharmaceutical products, and we could be subject to competition by compounders upon approval of VP-102, subject to the requirements set forth in Sections 503A and 503B of the FDCA.

Section 503A of the FDCA exempts licensed pharmacists or licensed physicians who compound products for identified, individual patients, based on the receipt of a valid prescription order, from the FDCA's new drug approval requirements, cGMP requirements, and the requirement to label products with adequate directions for use, provided certain conditions are met. These conditions include that the pharmacist or physician does not compound regularly or in inordinate amounts any drug product that is essentially a copy of a commercially available drug product, unless there is a difference between the compounded product and the commercially available product that is made for an individual patient, and which the prescribing practitioner determines produces a significant difference for that patient. The FDA has interpreted this prohibition to mean that the compounding of a product with the same active pharmaceutical ingredient as a commercially available drug, that has the same, similar, or an easily substitutable dosage strength as the commercially available drug, and that can be used by the same route of administration as the commercially available drug, cannot be conducted under Section 503A usually, very often, or at regular times or intervals, or more frequently or in larger quantities than needed to address unanticipated emergency circumstance, unless the limited exception described above applies.

In addition, compounding under Section 503A may only use bulk drug substances that appear on a list issued by FDA through regulations, and/or that comply with certain other conditions specified in the statute.

Unlike Section 503A, Section 503B of the FDCA allows certain entities to compound drugs that are not necessarily prepared in response to prescriptions for identified, individual patients. Such facilities must register with the FDA as outsourcing facilities, and once registered (including payment of a fee), the outsourcing facility must meet certain conditions in order to be exempt from the FDCA's approval requirements and the requirement to label products with adequate directions for use. Under Section 503B, a drug must be compounded in compliance with cGMP, by or under the direct supervision of a licensed pharmacist in order to be so exempt. The outsourcing facility must also report specific information about the products that it compounds, including a list of all of the products it compounded during the previous six months, and information about the compounded products, such as the source of the active ingredients used to compound pursuant to Section 503B(b)(2). If the outsourcing facility compounds using bulk drug substances, the bulk drug substances must either appear on a list established by the FDA of bulk drug substances for which there is a clinical need, or be used to compound drugs that appear on a list established by the FDA of drugs for which there is a shortage. Although the FDA has not yet established a list of bulk drug substances for which there is a clinical need, the FDA has announced an interim policy pursuant to which bulk drug substances may be nominated for inclusion on such list and, provided certain conditions are met, outsourcing facilities may compound with such bulk drug substances pending evaluation of the substances for inclusion on the FDA's list of bulk drug substances for which there is a clinical need. Cantharidin is currently listed among those nominated substances for which bulk drug substance may be used in compounding by outsourcing facilities pending FDA's evaluation. In March 2018, the FDA released a draft Guidance for Industry addressing the criteria by which the FDA intends to evaluate whether there exists a clinical need for compounding with a bulk drug substance, including, in the case of a bulk drug substance that is a component of an FDA-approved drug, an evaluation of whether there exists an attribute of the approved drug that makes it medically unsuitable to treat certain patients; whether the drug product proposed to be compounded is intended to address that attribute; and whether the drug product proposed to be compounded must be compounded from a bulk drug substance rather than from the finished, FDA-approved drug product. If FDA implements these criteria as proposed in the draft Guidance for Industry, and if VP-102 is approved, an outsourcing facility would need to satisfy these criteria before being permitted to compound a cantharidin product using bulk cantharidin.

In addition, an outsourcing facility must meet other conditions described in Section 503B, including reporting adverse events and labeling compounded products with certain information. Registered outsourcing facilities are prohibited from selling compounded drugs through a wholesale distributor, or from compounding drugs that are essentially copies of FDA-approved drugs. A drug is "essentially a copy of an approved drug" if it is identical or nearly identical to an approved drug, which the FDA has interpreted to mean that it has the same active ingredient(s), route of administration, dosage form, dosage strength and excipients as the approved drug, or if it has the same active ingredient as an approved drug and there is not a change from the approved drug that produces a clinical difference for an individual patient, as determined by the prescribing practitioner. Registered outsourcing facilities are subject to FDA inspection, and FDA conducts inspections on a risk-based frequency under Section 503B(b)(4) of the FDCA.

Federal and State Fraud and Abuse, Data Privacy and Security, and Transparency Laws and Regulations

In addition to FDA restrictions on marketing of pharmaceutical products, federal and state healthcare laws and regulations restrict business practices in the biopharmaceutical industry. These laws may impact, among other things, our current and future business operations, including our clinical research activities, and proposed sales, marketing and education programs and constrain the business or financial arrangements and relationships with healthcare providers and other parties through which we market, sell and distribute our products for which we obtain marketing approval. These laws include anti-kickback and false claims laws and regulations, data privacy and security, and transparency laws and regulations, including, without limitation, those laws described below.

The federal Anti-Kickback Statute prohibits, among other things, individuals or entities from knowingly and willfully offering, paying, soliciting or receiving remuneration, directly or indirectly, overtly or covertly, in cash or in kind to induce or in return for purchasing, leasing, ordering or arranging for or recommending the purchase, lease or order of any item or service reimbursable under Medicare, Medicaid or other federal healthcare programs. The term "remuneration" has been broadly interpreted to include anything of value. The federal Anti-Kickback Statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on one hand and prescribers, purchasers and formulary managers on the other hand. Although there are a number of statutory exceptions and regulatory safe harbors protecting some common activities from prosecution, the exceptions and safe harbors are drawn narrowly. Practices that involve remuneration that may be alleged to be intended to induce prescribing, purchases or recommendations may be subject to scrutiny if they do not qualify for an exception or safe harbor.

In addition, a person or entity does not need to have actual knowledge of this statute or specific intent to violate it in order to have committed a violation. Further, the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the False Claims Act and the civil monetary penalties statute.

The federal civil and criminal false claims laws, including the False Claims Act, which prohibit, among other things, any individual or entity from knowingly presenting, or causing to be presented, a false claim for payment to the federal government or knowingly making, using or causing to be made or used a false record or statement material to a false or fraudulent claim to the federal government. A claim includes "any request or demand" for money or property presented to the U.S. government. Several pharmaceutical and other healthcare companies have been prosecuted under these laws for allegedly providing free product to customers with the expectation that the customers would bill federal programs for the product. Other companies have been prosecuted for causing false claims to be submitted because of the companies' marketing of products for unapproved, and thus non-reimbursable, uses.

The federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, created additional federal criminal statutes that prohibit, among other things, knowingly and willfully executing a scheme to defraud any healthcare benefit program, including private third-party payors and knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services. Similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation.

HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, or HITECH, and their respective implementing regulations, impose certain requirements relating to the privacy, security and transmission of individually identifiable health information without appropriate authorization on certain health plans, healthcare clearinghouses and certain healthcare providers, known as covered entities, and their respective business associates, independent contractors that perform certain services involving the use or disclosure of individually identifiable health information. HITECH also created new tiers of civil monetary penalties, amended HIPAA to make civil and criminal penalties directly applicable to business associates, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce HIPAA and seek attorneys' fees and costs associated with pursuing federal civil actions.

The federal Physician Payments Sunshine Act requires certain manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program, with specific exceptions, to report annually to the Centers for Medicare & Medicaid Services, or CMS, information related to payments or other transfers of value made to physicians and teaching hospitals, and applicable manufacturers and applicable group purchasing organizations to report annually to CMS ownership and investment interests held by physicians and their immediate family members.

We may also be subject to state and foreign law equivalents of each of the above federal laws; state laws that require manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures; state laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government, or that otherwise restrict payments that may be made to healthcare providers; state and local laws that require the registration of pharmaceutical sales representatives; as well as state and foreign laws that govern the privacy and security of health information in some circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

Efforts to ensure that our business arrangements with third parties will comply with applicable healthcare laws and regulations will involve substantial costs. Because of the breadth of these laws and the narrowness of the statutory exceptions and regulatory safe harbors available, it is possible that some of our business activities could be subject to challenge under one or more of such laws. It is possible that governmental authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of these laws or any other governmental regulations that may apply to us, we may be subject to significant civil, criminal and administrative penalties, damages, fines, disgorgement, imprisonment, exclusion from participating in government funded healthcare programs, such as Medicare and Medicaid, additional reporting requirements and oversight if we become subject to a corporate integrity agreement or similar agreement to resolve allegations of non-compliance with these laws, contractual damages, reputational harm and the curtailment or restructuring of our operations. To the extent that any of our products are sold in a foreign country, we may be subject to similar foreign laws and regulations, which may include, for instance, applicable post-marketing requirements, including safety surveillance, anti-fraud and abuse laws and implementation of corporate compliance programs and reporting of payments or transfers of value to healthcare professionals.

Coverage and Reimbursement

Market acceptance and sales of any drug products depend in part on coverage and the extent to which adequate reimbursement for drug products will be available from third-party payors, including government health administration authorities, managed care organizations and other private health insurers. Coverage and reimbursement for our product also depends on coverage and adequate reimbursement for the procedures using VP-102 for the treatment of molluscum and/or common warts. Obtaining coverage and adequate reimbursement for our products may be particularly difficult because of the higher prices often associated with drugs administered under the supervision of a physician. Separate reimbursement for the product itself or the treatment or procedure in which our product is used may not be available. Even if the procedure using our product is covered, third-party payors may package the cost of the drug into the procedure payment and not separately reimburse the physician for the costs associated with our product. A decision by a third-party payor not to cover or separately reimburse for our products could reduce physician utilization of our products once approved. Additionally, in the United States, there is no uniform policy of coverage and reimbursement among third-party payors. Third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own coverage and reimbursement policies. However, decisions regarding the extent of coverage and amount of reimbursement to be provided is made on a payor-by-payor basis. One payor's determination to provide coverage for a drug product does not assure that other payors will also provide coverage, and adequate reimbursement.

Third-party payors determine which medical procedures they will cover and establish reimbursement levels. Even if a third-party payor covers a particular procedure, the resulting reimbursement payment rates may not be adequate. Patients who are treated in-office for a medical condition generally rely on third-party payors to reimburse all or part of the costs associated with the procedure and may be unwilling to undergo such procedures for the treatment of molluscum and/or common warts in the absence of such coverage and adequate reimbursement.

Reimbursement by a third-party payor may depend upon a number of factors, including the third-party payor's determination that a procedure is safe, effective, and medically necessary; appropriate for the specific patient; cost-effective; supported by peer-reviewed medical journals; included in clinical practice guidelines; and neither cosmetic, experimental, nor investigational.

Further, from time to time, typically on an annual basis, payment rates are updated and revised by third-party payors. Such updates could impact the demand for our product candidates, to the extent that customers who are prescribed our product candidates, if approved, are not separately reimbursed for the cost of the product candidates. An example of payment updates is the Medicare program updates to physician payments, which is done on an annual basis. In the past, when the application of the formula resulted in lower payment, Congress has passed interim legislation to prevent the reductions. The Medicare Access and CHIP Reauthorization Act of 2015, or MACRA, ended the use of the statutory formula and provided for a 0.5% annual increase in payment rates under the Medicare Physician Fee Schedule through 2019, but no annual update from 2020 through 2025. MACRA also introduced a merit based incentive bonus program for Medicare physicians beginning in 2019. At this time, it is unclear how the introduction of the merit based incentive program will impact overall physician reimbursement under the Medicare program.

Impact of Healthcare Reform on our Business

In the United States and some foreign jurisdictions, there have been, and continue to be, several legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay marketing approval of drug product candidates, restrict or regulate post-approval activities, and affect the profitable sale of drug product candidates.

Among policy makers and payors in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality and/or expanding access. In the United States, the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives. In March 2010, the ACA was passed, which substantially changed the way healthcare is financed by both the government and private insurers, and significantly impacts the U.S. pharmaceutical industry. The ACA, among other things: (i) increased the minimum Medicaid rebates owed by manufacturers under the Medicaid Drug Rebate Program and extends the rebate program to individuals enrolled in Medicaid managed care organizations; (ii) established an annual, nondeductible fee on any entity that manufactures or imports certain specified branded prescription drugs and biologic agents apportioned among these entities according to their market share in some government healthcare programs; (iii) expanded the availability of lower pricing under the 340B drug pricing program by adding new entities to the program; (iv) increased the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program, to 23.1% and 13% of the average manufacturer price for most branded and generic drugs, respectively and capped the total rebate amount for innovator drugs at 100% of the Average Manufacturer Price, or AMP; (v) expanded the eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to additional individuals, thereby potentially increasing manufacturers' Medicaid rebate liability; (vi) created a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research; and (vii) established a Center for Medicare Innovation at CMS to test innovative payment and service delivery models to lower Medicare and Medicaid spending, potentially including prescription drug.

Some of the provisions of the ACA have yet to be implemented, and there have been judicial and Congressional challenges to certain aspects of the ACA, as well as recent efforts by the Trump administration to repeal or replace certain aspects of the ACA. While Congress has not passed comprehensive repeal legislation, bills affecting the implementation of certain taxes under the ACA have been signed into law. The Tax Cuts and Jobs Act of 2017 includes a provision repealing, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the "individual mandate". Additionally, on January 22, 2018,

President Trump signed a continuing resolution on appropriations for fiscal year 2018 that delayed the implementation of certain ACA-mandated fees, including the so-called "Cadillac" tax on certain high cost employer-sponsored insurance plans, the annual fee imposed on certain health insurance providers based on market share, and the medical device excise tax on non-exempt medical devices. Further, the Bipartisan Budget Act of 2018, or the BBA, among other things, amends the ACA, effective January 1, 2019, to close the coverage gap in most Medicare drug plans, commonly referred to as the "donut hole."

Other legislative changes have been proposed and adopted since the ACA was enacted. These changes include aggregate reductions to Medicare payments to providers of 2% per fiscal year pursuant to the Budget Control Act of 2011, which began in 2013, and due to subsequent legislative amendments to the statute, including the BBA, will remain in effect through 2027 unless additional Congressional action is taken. The American Taxpayer Relief Act of 2012, among other things, further reduced Medicare payments to several providers, including hospitals and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. These new laws may result in additional reductions in Medicare and other healthcare funding, which could have an adverse effect on customers for our product candidates, if approved, and, accordingly, our financial operations.

Additionally, there has been heightened governmental scrutiny in the United States of pharmaceutical pricing practices in light of the rising cost of prescription drugs and biologics. Such scrutiny has resulted in several recent congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for products. At the federal level, the Trump administration's budget proposal for fiscal year 2019 contains further drug price control measures that could be enacted during the 2019 budget process or in other future legislation, including, for example, measures to permit Medicare Part D plans to negotiate the price of certain drugs under Medicare Part B, to allow some states to negotiate drug prices under Medicaid, and to eliminate cost sharing for generic drugs for low-income patients. While any proposed measures will require authorization through additional legislation to become effective, Congress and the Trump administration have each indicated that it will continue to seek new legislative and/or administrative measures to control drug costs. At the state level, legislatures are increasingly passing legislation and implementing regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

Employees

As of March 1, 2018, we had seven full time employees. All of our employees are located in the United States. None of our employees is represented by a labor union or covered by a collective bargaining agreement. We consider our relationship with our employees to be good.

Facilities

We operate in a . We believe that our existing facilities are suitable and adequate to meet our current needs. We intend to add new facilities or expand existing facilities as we add employees, and we believe that suitable additional or substitute space will be available as needed to accommodate any such expansion of our operations.

Legal Proceedings

We are not subject to any material legal proceedings. From time to time, we may be involved in various claims and legal proceedings relating to claims arising out of our operations. We are not currently a party to any legal proceedings that, in the opinion of our management, are likely to have a material adverse effect on our business. Regardless of outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors.

MANAGEMENT

Executive Officers and Directors

The following table provides information regarding our current executive officers, other key employees and directors, including their ages as of March 15, 2018:

NAME	AGE	POSITION(S)
Executive Officers		
Ted White	53	Chief Executive Officer and President
Chris Degnan	38	Chief Financial Officer
Linda Palczuk	56	Chief Operating Officer
Joe Bonaccorso	54	Chief Commercial Officer
Matt Davidson	33	Chief Scientific Officer and Director
Other Key Employees		
Anthony Cavallo	54	Vice President, Professional Relations
Non-Employee Directors		
Paul B. Manning	62	Chairman of the Board
Sean Stalfort	48	Director
Glenn Oclassen	75	Director
Jayson Rieger	42	Director

(1) Member of the audit committee. serves as chair of this committee.
(2) Member of the compensation committee. serves as chair of this committee.
(3) Member of the nominating and corporate governance committee. serves as chair of this committee.

Executive Officers

Ted White has served as our President and Chief Executive Officer since December 2017. Previously, from January 2011 to September 2017, Mr. White was the President and General Manager at Almirall, a global pharmaceutical company based in Barcelona, Spain with a focus on medical dermatology, the parent company of Aqua Pharmaceuticals. Prior to Aqua Pharmaceuticals, Mr. White was at Novartis from 1989 to 2010, where he served in a number of roles, most recently as a Managing Director. Mr. White holds a M.B.A. from St. Joseph's University and a B.A. in General Arts from Villanova University.

Chris Degnan has served as our Chief Financial Officer since March 2018. Prior to joining our company, Mr. Degnan held roles of increasing responsibility at Endo International plc, a generics and specialty branded pharmaceutical company, beginning in November 2014, where he most recently served as the Vice President of Finance, Corporate FP&A and International Pharmaceuticals Segment Chief Financial Officer from December 2016 to March 2018. Prior to that, he was the Vice President of Finance, Chief Financial Officer for Endo's U.S. Branded Pharmaceuticals segment. Prior to joining Endo, Mr. Degnan held roles of increasing responsibility at AstraZeneca plc, a global biopharmaceutical company, beginning in 2004, most recently as Senior Finance Director, U.S. Commercial Finance from July 2013 to November 2014. He is a Certified Public Accountant in the State of Pennsylvania (voluntary inactive status). Mr. Degnan holds a B.S. degree in Accounting from the University of Notre Dame.

Linda Palczuk has served as our Chief Operating Officer since February 2018. Prior to that, Ms. Palczuk was President & Chief Executive Officer for Osiris Therapeutics, Inc. from July 2017 to February 2018. Between January 2016 and July 2017 Ms. Palczuk served as an independent consultant to pharmaceutical companies. Ms. Palczuk spent 30 years with AstraZeneca, where she held senior level commercial roles, including Vice President, Established Brands & Global Commercial Excellence between January 2012 and March 2015. Ms. Palczuk received her B.A. in Biology from Franklin & Marshall College and her M.B.A. from the University of Delaware.

Joe Bonaccorso has served as our Chief Commercial Officer since February 2018. From 2012 to February 2018, Mr. Bonaccorso started and ran the US Pharma Division for Pierre Fabre, under the name of Pierre Fabre Pharmaceuticals Inc. Pierre Fabre Pharmaceuticals Inc. was dedicated to both Pediatric Dermatology and Dermatology. Prior to joining Pierre Fabre, Mr. Bonaccorso spent 24 years at Novartis Pharmaceuticals, working in a variety of senior leadership roles in sales, marketing, national sales and training. Mr. Bonaccorso holds an M.A./M.B.A. from Kean University and a B.S. in Biology from Fairleigh Dickinson University.

Matt Davidson has served as our Chief Scientific Officer since December 2017. From our inception in August 2013 to December 2017, Dr. Davidson served as our Chief Executive Officer and President and Treasurer. Dr. Davidson has also served as a member of our board of directors since August 2013. Dr. Davidson holds a Ph.D. in Immunology from Stanford University and a B.A. in Molecular and Cellular Biology from the University of California, Berkeley. Our board of directors believes that Dr. Davidson should serve as a director based upon his scientific expertise and his unique knowledge of our product candidates as our founder and inventor of our core technologies.

Other Key Employees

Anthony Cavallo has served as our Vice President of Professional Relations since December 2017. Prior to his current role with us, Mr. Cavallo was the Executive Director at Aqua Pharmaceuticals from 2011 to September 2017. Mr. Cavallo also held key roles at Novartis Pharmaceuticals from 1988 to 2011, including as the Associate Director of Corporate Group Practice Accounts and Federal & Commercial Health Plan contracting from 1998 to 2011. Mr. Cavallo holds a B.S. in Marketing from Kutztown University.

Non-Employee Directors

Paul B. Manning has served as the chairman of our board of directors since December 2017 and as a member of our board of directors since December 2015. Mr. Manning is the President and Chief Executive Officer of PBM Capital Group, LLC, a private equity investment firm in the business of investing in healthcare and life-science related companies, which he founded in 2010. Prior to that, Mr. Manning founded PBM Products in 1997, a producer of infant formula and baby food, which was sold to Perrigo Corporation in 2010. Mr. Manning is a director of AveXis, Inc., a publicly traded clinical-stage gene therapy company, and Dova Pharmaceuticals, Inc., a publicly traded pharmaceutical company, as well as various private companies. Mr. Manning was previously on the board of directors of Perrigo Corporation and Concordia Healthcare Corp. Mr. Manning received a B.S. in microbiology from the University of Massachusetts. Our board of directors believes that Mr. Manning should serve as a director based upon his over 30 years of managerial and operational experience in the healthcare industry and as an investor in healthcare related companies.

Sean Stalfort has served as a member of our board of directors since December 2015. Mr. Stalfort has been a partner at PBM Capital Group, LLC, a private equity investment firm in the business of investing in healthcare and life-science related companies, since May 2010. Prior to joining PBM Capital Group, LLC, Mr. Stalfort was the Executive Vice President for New Business Development/M&A for PBM Products. Mr. Stalfort is also a founding Partner of Octagon Partners and Octagon Finance, historic tax credit real estate companies. Mr. Stalfort is a director of Dova Pharmaceuticals, Inc., a publicly traded pharmaceutical company, as well as several private healthcare companies. Mr. Stalfort received a B.A. in Business Economics and Political Science from Brown University. Our board of directors believes that Mr. Stalfort should serve as a director based upon his years as an investor in healthcare related companies.

Glenn Oclassen has served as a member of our board of directors since December 2015. Prior to his retirement in October 2014, Mr. Oclassen was the President and Chief Executive Officer, and a director of Transcept Pharmaceuticals, Inc. from 2002 until the company merged with Paratek Pharmaceuticals. Mr. Oclassen was previously the founder, President and CEO of Oclassen Pharmaceuticals which was sold to

Watson Laboratories in 1997. Mr. Oclassen holds a B.S. in zoology from San Diego State University. Our board of directors believes that Mr. Oclassen should serve as a director based upon his pharmaceutical industry experience in multiple capacities from sales and marketing to chief executive positions.

Jayson Rieger has served as a member of our board of directors since December 2015. Dr. Rieger has been a principal at PBM Capital Group since 2014, where he manages new investment evaluation, deal sourcing, and provides technical and operational business support for portfolio companies. Prior to his tenure at PBM Capital, Dr. Rieger served as Corporate Senior Vice President and President of the Human Therapeutics Division at Intrexon Corporation, a synthetic biology company, from 2012 to 2013. Dr. Rieger also served as the Vice President of Research and Virginia Operations for Clinical Data, Inc. from 2008 to its acquisition by Forest Labs in 2011. He also previously held the role of Vice President of Lead Development at Adenosine Therapeutics, LLC from 2002 until it was acquired by Clinical Data in 2008. Dr. Rieger received his Ph.D. from the University of Virginia Dept. of Chemistry, MBA from the Darden Business School and B.A. from Rollins College. Our board of directors believes that Dr. Rieger should serve as a director based upon his years of experience working with healthcare and pharmaceutical companies.

Board Composition

Our board of directors currently consists of five members. Mr. Manning is the chairman of our board of directors. Each director is currently elected to the board for a one-year term, to serve until the election and qualification of successor directors at the annual meeting of stockholders, or until the director's earlier removal, resignation or death.

Our directors were elected to and currently serve on the board pursuant to a voting agreement among us and several of our largest stockholders. This agreement will terminate upon the closing of this offering, after which there will be no further contractual obligations regarding the election of our directors.

In accordance with our amended and restated certificate of incorporation, which will be in effect upon the closing of this offering, our board of directors will be divided into three classes, each of which will consist, as nearly as possible, of one-third of the total number of directors constituting our entire board and which will serve staggered three-year terms. At each annual meeting of stockholders, the successors to directors whose terms then expire will be elected to serve from the time of election and qualification until the third annual meeting following election. Our directors will be divided among the three classes as follows:

- Class I, which will consist of and , and their term will expire at our first annual meeting of stockholders to be held after the closing of this offering;
- Class II, which will consist of and , and their term will expire at our second annual meeting of stockholders to be held after the closing of this offering; and
- Class III, which will consist of and , and their term will expire at our third annual meeting of stockholders to be held after the closing of this offering.

Our amended and restated bylaws, which will become effective upon the closing of this offering, will provide that the authorized number of directors may be changed only by resolution approved by a majority of our board of directors. Any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors.

The division of our board of directors into three classes with staggered three-year terms may delay or prevent a change of our management or a change of control.

Director Independence

Applicable Nasdaq rules require a majority of a listed company's board of directors to be comprised of independent directors within one year of listing. In addition, Nasdaq rules require that, subject to specified exceptions, each member of a listed company's audit, compensation and nominating and corporate governance committees be independent and that audit committee members also satisfy independence criteria set forth in Rule 10A-3 under the Exchange Act of 1934, as amended, or the Exchange Act. The Nasdaq independence definition includes a series of objective tests, such as that the director is not, and has not been for at least three years, one of our employees, that neither the director nor any of his family members has engaged in various types of business dealings with us and that the director is not associated with the holders of more than 5% of our common stock. In addition, under applicable Nasdaq rules, a director will only qualify as an "independent director" if, in the opinion of the listed company's board of directors, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director.

Our board of directors has determined that all of our directors, except for and , are independent directors, as defined under applicable Nasdaq rules. In making such determination, our board of directors considered the relationships that each such non-employee director has with our company and all other facts and circumstances that our board of directors deemed relevant in determining his or her independence, including the beneficial ownership of our capital stock by each non-employee director.

There are no family relationships among any of our directors or executive officers.

Role of the Board in Risk Oversight

One of the key functions of our board of directors is informed oversight of our risk management process. Our board of directors does not have a standing risk management committee, but rather administers this oversight function directly through the board of directors as a whole, as well as through various standing committees of our board of directors that address risks inherent in their respective areas of oversight. In particular, our board of directors is responsible for monitoring and assessing strategic risk exposure and our audit committee has the responsibility to consider and discuss our major financial risk exposures and the steps our management has taken to monitor and control these exposures, including guidelines and policies to govern the process by which risk assessment and management is undertaken. The audit committee also monitors compliance with legal and regulatory requirements.

Board Committees

Our board of directors has established an audit committee, compensation committee and a nominating and corporate governance committee, each of which operate pursuant to a committee charter. Our board of directors may establish other committees to facilitate the management of our business. The composition and functions of each committee are described below.

Audit Committee

Upon completion of this offering, our audit committee will consist of , and , with serving as chair of the audit committee. Our board of directors has determined that each of these individuals meets the independence requirements of the Sarbanes-Oxley Act of 2002, as amended, or the Sarbanes-Oxley Act, Rule 10A-3 under the Exchange Act and the applicable listing standards of Nasdaq. Each member of our audit committee can read and understand fundamental financial statements in accordance with Nasdaq audit committee requirements. In arriving at this determination, the board has examined each audit committee member's scope of experience and the nature of their prior and/or current employment.

Our board of directors has determined that qualifies as an audit committee financial expert within the meaning of SEC regulations and meets the financial sophistication requirements of The Nasdaq Listing Rules. In making this determination, our board has considered formal education and previous and current experience in financial and accounting roles. Both our independent registered public accounting firm and management periodically meet privately with our audit committee.

The functions of this committee include, among other things:

- evaluating the performance, independence and qualifications of our independent auditors and determining whether to retain our existing independent auditors or engage new independent auditors;
- reviewing and approving the engagement of our independent auditors to perform audit services and any permissible non-audit services;
- monitoring the rotation of partners of our independent auditors on our engagement team as required by law;
- prior to engagement of any independent auditor, and at least annually thereafter, reviewing relationships that may reasonably be thought to bear on their independence, and assessing and otherwise taking the appropriate action to oversee the independence of our independent auditor;
- reviewing our annual and quarterly financial statements and reports, including the disclosures contained under the caption "Management's Discussion and Analysis of Financial Condition and Results of Operations," and discussing the statements and reports with our independent auditors and management;
- reviewing with our independent auditors and management significant issues that arise regarding accounting principles and financial statement presentation and matters concerning the scope, adequacy and effectiveness of our financial controls;
- reviewing with management and our auditors any earnings announcements and other public announcements regarding material developments;
- establishing procedures for the receipt, retention and treatment of complaints received by us regarding financial controls, accounting or auditing matters and other matters;
- preparing the report that the SEC requires in our annual proxy statement;
- reviewing and providing oversight of any related-person transactions in accordance with our related person transaction policy and reviewing and monitoring compliance with legal and regulatory responsibilities, including our code of business conduct and ethics;
- reviewing our major financial risk exposures, including the guidelines and policies to govern the process by which risk assessment and risk management is implemented;
- reviewing on a periodic basis our investment policy; and
- reviewing and evaluating on an annual basis the performance of the audit committee and the audit committee charter.

We believe that the composition and functioning of our audit committee complies with all applicable requirements of the Sarbanes-Oxley Act, and all applicable SEC and Nasdaq rules and regulations. We intend to comply with future requirements to the extent they become applicable to us.

Compensation Committee

Upon completion of this offering, our compensation committee will consist of , and , with serving as chair of the compensation committee. Each of these individuals is a non-employee director, as defined in Rule 16b-3 promulgated under the Exchange Act and is an "outside director," as defined pursuant to Section 162(m) of the Internal Revenue Code of 1986, as amended, or the Code. Our board of directors has determined that each of these individuals is ''independent'' as defined under the applicable listing standards of Nasdaq, including the standards specific to members of a compensation committee. The functions of this committee include, among other things:

- reviewing, modifying and approving (or if it deems appropriate, making recommendations to the full board of directors regarding) our overall compensation strategy and policies;
- making recommendations to the full board of directors regarding the compensation and other terms of employment of our executive officers;
- reviewing and making recommendations to the full board of directors regarding performance goals and objectives relevant to the compensation of our executive officers and assessing their performance against these goals and objectives;
- reviewing and approving (or if it deems it appropriate, making recommendations to the full board of directors regarding) the equity incentive plans, compensation plans and similar programs advisable for us, as well as modifying, amending or terminating existing plans and programs;
- evaluating risks associated with our compensation policies and practices and assessing whether risks arising from our compensation policies and practices for our employees are reasonably likely to have a material adverse effect on us;
- reviewing and making recommendations to the full board of directors regarding the type and amount of compensation to be paid or awarded to our non-employee board members;
- establishing policies with respect to votes by our stockholders to approve executive compensation to the extent required by Section 14A of the Exchange Act and, if applicable, determining our recommendations regarding the frequency of advisory votes on executive compensation;
- reviewing and assessing the independence of compensation consultants, legal counsel and other advisors as required by Section 10C of the Exchange Act;
- administering our equity incentive plans;
- establishing policies with respect to equity compensation arrangements;
- reviewing the competitiveness of our executive compensation programs and evaluating the effectiveness of our compensation policy and strategy in achieving expected benefits to us;
- reviewing and making recommendations to the full board of directors regarding the terms of any employment agreements, severance arrangements, change in control protections and any other compensatory arrangements for our executive officers;
- reviewing with management and approving our disclosures under the caption "Compensation Discussion and Analysis" in our periodic reports or proxy statements to be filed with the SEC, to the extent such caption is included in any such report or proxy statement;

- preparing the report that the SEC requires in our annual proxy statement; and
- reviewing and evaluating on an annual basis the performance of the compensation committee and the compensation committee charter.

We believe that the composition and functioning of our compensation committee complies with all applicable requirements of the Sarbanes-Oxley Act, and all applicable SEC and Nasdaq rules and regulations. We intend to comply with future requirements to the extent they become applicable to us.

Nominating and Corporate Governance Committee

Upon completion of this offering, our nominating and corporate governance committee will consist of , and , with serving as chair of the nominating and corporate governance committee. Our board of directors has determined that each of these individuals is "independent" as defined under the applicable listing standards of Nasdaq and SEC rules and regulations. The functions of this committee include, among other things:

- identifying, reviewing and evaluating candidates to serve on our board of directors;
- determining the minimum qualifications for service on our board of directors;
- evaluating director performance on the board and applicable committees of the board and determining whether continued service on our board is appropriate;
- evaluating, nominating and recommending individuals for membership on our board of directors;
- evaluating nominations by stockholders of candidates for election to our board of directors;
- considering and assessing the independence of members of our board of directors;
- developing a set of corporate governance policies and principles and recommending to our board of directors any changes to such policies and principles;
- reviewing and making recommendations to the board of directors with respect to management succession planning;
- considering questions of possible conflicts of interest of directors as such questions arise; and
- reviewing and evaluating on an annual basis the performance of the nominating and corporate governance committee and the nominating and corporate governance committee charter.

We believe that the composition and functioning of our nominating and corporate governance committee complies with all applicable requirements of the Sarbanes-Oxley Act, and all applicable SEC and Nasdaq rules and regulations. We intend to comply with future requirements to the extent they become applicable to us.

Our board of directors may from time to time establish other committees.

Compensation Committee Interlocks and Insider Participation

None of our directors who serve as a member of our compensation committee is, or has at any time during the past year been, one of our officers or employees. None of our executive officers currently serves, or in the past year has served, as a member of the board of directors or compensation committee of any other entity that has one or more executive officers serving on our board of directors or compensation committee.

Code of Business Conduct and Ethics

Effective upon the closing of this offering, we will adopt a Code of Business Conduct and Ethics, or the Code of Conduct, applicable to all of our employees, executive officers and directors. Following the closing of this offering, the Code of Conduct will be available on our website at *www.verrica.com*. We intend to post on our website all disclosures that are required by law or the listing standards of The Nasdaq Global Market concerning any amendments to, or waivers from, any provision of the Code of Conduct.

Non-Employee Director Compensation

In the year ended December 31, 2017, we did not pay any fees to, make any equity awards or non-equity awards to, or pay any other compensation to the non-employee members of our board of directors for their services as directors. Our non-employee directors only received reimbursement of their actual out-of-pocket costs and expenses incurred in connection with attending board meetings.

In August 2014, we entered into an advisor agreement with Glenn Oclassen pursuant to which Mr. Oclassen was eligible to receive an option to purchase 142,132 shares of our common stock in exchange for his advisory services to us. We granted Mr. Oclassen 142,132 shares of restricted common stock in lieu of the option. The restricted shares were vested in full as of July 2016.

We expect that our board of directors will adopt a director compensation policy for non-employee directors to be effective following the completion of this offering.

EXECUTIVE COMPENSATION

From January 1, 2017 to December 18, 2017, Matt Davidson acted as our President and Chief Executive Officer. In 2017, Jayson Rieger acted as our Chief Operating Officer. Beginning on September 18, 2017, James Reebals served as our Chief Financial Officer. On December 18, 2017, Ted White was appointed as our Chief Executive officer and Matt Davidson was appointed as our Chief Scientific Officer. Both Dr. Rieger and Mr. Reebals are employees of PBM Capital Group, LLC. In February 2018, we hired Joseph Bonaccorso as our Chief Commercial Officer and Linda Palczuk as our Chief Operating Officer. In March 2018, we hired Chris Degnan as our Chief Financial Officer. Dr. Rieger ceased serving as our Chief Operating Officer in February 2018 and Mr. Reebals ceased serving as our Chief Financial Officer in March 2018.

We refer to Dr. Davidson, Dr. Rieger and Mr. White as our named executive officers for 2017.

The following tables and accompanying narrative disclosure set forth information about the compensation paid to our named executive officers, including the limited compensation paid to PBM Capital Group, LLC that may be attributed to Dr. Rieger's services to us during 2017. Although Mr. Bonaccorso, Ms. Palczuk and Mr. Degnan commenced services with us in 2018, we have included information in the following narrative regarding each of such officers' compensation where it may be material to an understanding of our executive compensation program.

2017 Summary Compensation Table

Although we did not pay Dr. Rieger any base salary, bonus or stock-based or other compensation during 2017, we have a services agreement with PBM Capital Group, LLC, which provides for certain scientific and technical, accounting, operations and back office support services as well as legal and professional fees and consulting services, pursuant to which we pay PBM Capital Group, LLC a flat fee of $30,000 per year. We paid $30,000 to PBM Capital Group, LLC pursuant to this services agreement in 2017. Other than the portion of the management fees paid to PBM Capital Group, LLC that may be attributable to Dr. Rieger's services to us, if any, we did not pay any other compensation, benefits or perquisites for Dr. Rieger's services to us during 2017. It is not possible to determine the amount of such fees that may be attributable to the services provided by Dr. Rieger.

The following table presents the compensation awarded to, earned by or paid to each of our other two named executive officers, Mr. White and Dr. Davidson, for the year ended December 31, 2017.

Name and Principal Position	Year	Salary ($)	All Other Compensation ($)	Total ($)
Matt Davidson Chief Scientific Officer, Former President and Chief Executive Officer	2017	219,167	19,273(1)	238,440
Ted White President and Chief Executive Officer	2017	24,359	—	24,359

(1) This amount consists of a health insurance stipend of $14,772 that we paid to Dr. Davidson as well as company contributions made to Dr. Davidson's 401(k) plan account.

Outstanding Equity Awards at December 31, 2017

As of December 31, 2017, our named executive officers did not hold any outstanding stock options, and Mr. White and Dr. Rieger did not hold any outstanding stock awards. We granted stock options to our current executive officers in 2018, described directly below under the section titled "— Employment Arrangements and

Potential Payments upon Termination of Employment." The following table provides information about outstanding stock awards held by Dr. Davidson at December 31, 2017.

	Stock Awards	
Name	Number of Shares of Stock That Have Not Vested (#)	Market Value of Shares of Stock That Have Not Vested ($)
Matt Davidson	1,454,946(1)	3,186,332(2)

(1) These restricted shares will vest on the earliest to occur of (i) the consummation of a change of control transaction, (ii) the FDA's approval of a new drug application for a drug containing cantharidin or a cantharidin derivative, (iii) the Company's commencement of sale of products containing cantharidin or a cantharidin derivative, and (iv) a termination of his employment by us without cause or by Dr. Davidson for good reason.

(2) Based on the valuation of our common stock of $2.19 per share as of December 31, 2017.

Employment Arrangements and Potential Payments upon Termination of Employment or Change in Control

We have entered into employment agreements with each of our current executive officers, the key terms of which are described below.

Mr. White

We entered into an employment agreement with Mr. White, our Chief Executive Officer and President, on December 11, 2017. Under the terms of the agreement, Mr. White is entitled to receive an annual base salary of $400,000 and an annual bonus of up to 45% of his annual base salary based upon our board of directors' assessment of Mr. White's performance and our attainment of targeted goals as set by the board of directors in its sole discretion. In accordance with the agreement, Mr. White was also awarded an option to purchase 1,241,476 shares of our common stock in February 2018 under our 2013 plan. 25% of the shares subject to the option vest on December 11, 2018 (the first anniversary of Mr. White's commencement of employment) and the remaining shares vest in 36 equal monthly installments thereafter, subject to Mr. White's continued service and subject to full acceleration in the event of a sale event, as defined in Mr. White's agreement, during such continued service. Pursuant to his agreement, Mr. White also entered into a confidentiality, inventions assignment, non-competition and non-solicitation agreement with us.

Pursuant to the terms of his employment agreement, Mr. White's employment is at will and may be terminated at any time by us or Mr. White. If Mr. White's employment is terminated by us without cause or by Mr. White for good reason, then Mr. White would be eligible to receive severance benefits. The length of severance benefits that Mr. White would receive depends on when his employment is terminated. If his employment is terminated on or before December 11, 2018, then he would not be entitled to severance benefits. If his employment is terminated after December 11, 2018 but before December 11, 2019, then he would be entitled to six months of severance benefits. If his employment is terminated after December 11, 2019, then he would be entitled to 12 months of severance benefits. During the applicable severance period, Mr. White would receive the following severance benefits, less applicable tax withholding:

- payment of his then-current base salary in accordance with normal payroll procedures for the applicable severance period; and
- payment or reimbursement of continued health coverage for Mr. White and his dependents under COBRA for the applicable severance period.

Mr. Degnan

We entered into an employment agreement with Chris Degnan, our Chief Financial Officer, in February 2018. Under the terms of the agreement, Mr. Degnan is entitled to receive an annual base salary of $325,000 and an annual bonus of up to 40% of his annual base salary based upon our board of directors' assessment of Mr. Degnan's performance and our attainment of targeted goals as set by the board of directors in their sole discretion. In accordance with the agreement, Mr. Degnan was also awarded an option to purchase 125,000 shares of our common stock in March 2018 under our 2013 plan. 25% of the shares subject to the option vest on March 5, 2019 (the first anniversary of Mr. Degnan's commencement of employment) and the remaining shares vest in 36 equal monthly installments thereafter, subject to Mr. Degnan's continued service and subject to full acceleration in the event of a sale event, as defined in Mr. Degnan's agreement, during such continued service. Pursuant to his agreement, Mr. Degnan also entered into a confidentiality, inventions assignment, non-competition and non-solicitation agreement with us.

Pursuant to the terms of his employment agreement, Mr. Degnan's employment is at will and may be terminated at any time by us or Mr. Degnan. If Mr. Degnan's employment is terminated by us without cause or by Mr. Degnan for good reason, then Mr. Degnan would be eligible to receive severance benefits. The length of severance benefits that Mr. Degnan would receive depends on when his employment is terminated. If his employment is terminated on or before March 5, 2019, then he would not be entitled to severance benefits. If his employment is terminated after March 5, 2019 but before March 5, 2020, then he would be entitled to six months of severance benefits. If his employment is terminated after March 5, 2020, then he would be entitled to 12 months of severance benefits. During the applicable severance period, Mr. Degnan would receive the following severance benefits, less applicable tax withholding:

- payment of his then-current base salary in accordance with normal payroll procedures for the applicable severance period; and
- payment or reimbursement of continued health coverage for Mr. Degnan and his dependents under COBRA for the applicable severance period.

Ms. Palczuk

We entered into an employment agreement with Ms. Palczuk, our Chief Operating Officer, in February 2018. Under the terms of the agreement, Ms. Palczuk is entitled to receive an annual base salary of $350,000 and an annual bonus of up to 40% of her annual base salary based upon our board of directors' assessment of Ms. Palczuk's performance and our attainment of targeted goals as set by the board of directors in its sole discretion. In accordance with the agreement, Ms. Palczuk was awarded an option to purchase 195,000 shares of our common stock in February 2018 under our 2013 plan. 25% of the shares subject to the option vest on February 26, 2019 (the first anniversary of Ms. Palczuk's commencement of employment) and the remaining shares vest in 36 equal monthly installments thereafter, subject to Ms. Palczuk's continued service and subject to full acceleration in the event of a sale event, as defined in Ms. Palczuk's agreement, during such continued service. Pursuant to her agreement, Ms. Palczuk also entered into a confidentiality, inventions assignment, non-competition and non-solicitation agreement with us.

Pursuant to the terms of her employment agreement, Ms. Palczuk's employment is at will and may be terminated at any time by us or Ms. Palczuk. If Ms. Palczuk's employment is terminated by us without cause or by Ms. Palczuk for good reason, then Ms. Palczuk would be eligible to receive severance benefits. The length of severance benefits that Ms. Palczuk would receive depends on when her employment is terminated. If her employment is terminated on or before February 26, 2019, then she would not be entitled to severance benefits. If her employment is terminated after February 26, 2019 but before February 26, 2020, then she is entitled to six

months of severance benefits. If her employment is terminated after February 26, 2020, then she is entitled to 12 months of severance benefits. During the applicable severance period, Ms. Palczuk would receive the following severance benefits, less applicable tax withholding:

- payment of her then-current base salary in accordance with normal payroll procedures for the applicable severance period; and
- payment or reimbursement of continued health coverage for Ms. Palczuk and her dependents under COBRA for the applicable severance period.

Mr. Bonaccorso

We entered into an employment agreement with Mr. Bonaccorso, our Chief Commercial Officer, in January 2018. Under the terms of the agreement, Mr. Bonaccorso is entitled to receive an annual base salary of $350,000 and an annual bonus of up to 40% of his annual base salary based upon our board of directors' assessment of Mr. Bonaccorso's performance and our attainment of targeted goals as set by the board of directors in their sole discretion. In connection with his employment, Mr. Bonaccorso was also awarded an option to purchase 175,000 shares of common stock in February 2018 under our 2013 plan. 25% of the shares subject to the option vest on February 7, 2019 (the first anniversary of Mr. Bonaccorso's commencement of employment) and the remaining shares vest in 36 equal monthly installments thereafter, subject to Mr. Bonaccorso's continued service and subject to full acceleration in the event of a sale event, as defined in Mr. Bonaccorso's agreement, during such continued service. Pursuant to his agreement, Mr. Bonaccorso also entered into a confidentiality, inventions assignment, non-competition and non-solicitation agreement with us.

Pursuant to the terms of his employment agreement, Mr. Bonaccorso's employment is at will and may be terminated at any time by us or Mr. Bonaccorso. If Mr. Bonaccorso's employment is terminated by us without cause or by Mr. Bonaccorso for good reason, then Mr. Bonaccorso would be eligible to receive severance benefits. The length of severance benefits that Mr. Bonaccorso would receive depends on when his employment is terminated. If his employment is terminated on or before February 7, 2019, then he would not be entitled to severance benefits. If his employment is terminated after February 7, 2019 but before February 7, 2020, then he would be entitled to six months of severance benefits. If his employment is terminated after February 7, 2020, then he would be entitled to 12 months of severance benefits. During the applicable severance period, Mr. Bonaccorso would receive the following severance benefits, less applicable tax withholding:

- payment of his then-current base salary in accordance with normal payroll procedures for the applicable severance period; and
- payment or reimbursement of continued health coverage for Mr. Bonaccorso and his dependents under COBRA for the applicable severance period.

Dr. Davidson

We entered into an employment agreement with Dr. Davidson, our Chief Scientific Officer, on December 2015. Under the terms of the agreement, Dr. Davidson was originally entitled to receive an annual base salary of $180,000, which was subsequently increased to $200,000 on January 1, 2016, increased to $220,000 on January 16, 2017 and increased to $300,000 on February 15, 2018, and an annual bonus of up to 35% of his annual base salary based upon our board of directors' assessment of Dr. Davidson's performance and our performance goals determined in consultation with Dr. Davidson. Dr. Davidson also entered into a confidentiality, inventions assignment, and non-solicitation agreement with us.

Pursuant to the terms of his employment agreement, Dr. Davidson's employment is at will and may be terminated at any time by us or Dr. Davidson. If Dr. Davidson's employment is terminated by us without cause or by Dr. Davidson for good reason, then Dr. Davidson is entitled to receive the following severance benefits, less applicable tax withholdings:

- payment of his then-current base salary in accordance with normal payroll procedures for the twelve months following his termination date;
- payment or reimbursement of continued health coverage for Dr. Davidson and his dependents under COBRA for a period up to twelve months; and
- 100% of Dr. Davidson's then-outstanding and unvested restricted stock awards or other equity awards will become vested and exercisable.

In addition, Dr. Davidson's employment agreement provides that any then-outstanding and unvested restricted stock awards or other equity awards will become fully vested and exercisable immediately prior to a change in control of our company, as defined in Dr. Davidson's employment agreement.

Equity Incentive Plans

2018 Equity Incentive Plan

We expect that our board of directors will adopt, and our stockholders will approve, prior to the closing of this offering our 2018 Equity Incentive Plan, or our 2018 plan. We do not expect to issue equity awards under our 2018 plan until after the closing of this offering. Our 2018 plan will provide for the grant of incentive stock options within the meaning of Section 422 of the Code to our employees and our parent and subsidiary corporations' employees, and for the grant of nonstatutory stock options, restricted stock awards, restricted stock unit awards, stock appreciation rights, performance stock awards and other forms of stock compensation to our employees, including officers, consultants and directors. Our 2018 plan will also provide for the grant of performance cash awards to our employees, consultants and directors.

Authorized Shares

The maximum number of shares of our common stock that may be issued under our 2018 plan is shares. The number of shares of our common stock reserved for issuance under our 2018 plan will automatically increase on January 1 of each year, beginning on January 1 of the year after the closing of this offering and ending on January 1, 2028, by % of the total number of shares of our common stock outstanding on December 31 of the preceding calendar year, or a lesser number of shares as may be determined by our board of directors. The maximum number of shares that may be issued pursuant to exercise of incentive stock options under the 2018 plan is .

Shares issued under our 2018 plan may be authorized but unissued or reacquired shares of our common stock. Shares subject to stock awards granted under our 2018 plan that expire or terminate without being exercised in full, or that are paid out in cash rather than in shares, will not reduce the number of shares available for issuance under our 2018 plan. Additionally, shares issued pursuant to stock awards under our 2018 plan that we repurchase or that are forfeited, as well as shares reacquired by us as consideration for the exercise or purchase price of a stock award or to satisfy tax withholding obligations related to a stock award, will become available for future grant under our 2018 plan.

Administration

Our board of directors, or a duly authorized committee thereof, has the authority to administer our 2018 plan. Our board of directors has delegated its authority to administer our 2018 plan to our compensation committee under the terms of the compensation committee's charter. Our board of directors may also delegate to one or more of our officers the authority to (i) designate employees other than officers to receive specified stock awards and (ii) determine the number of shares of our common stock to be subject to such stock awards. Subject to the terms of our 2018 plan, the administrator has the authority to determine the terms of awards, including recipients, the exercise price or strike price of stock awards, if any, the number of shares subject to each stock award, the fair market value of a share of our common stock, the vesting schedule applicable to the awards, together with any vesting acceleration, the form of consideration, if any, payable upon exercise or settlement of the stock award and the terms and conditions of the award agreements for use under our 2018 plan.

The administrator has the power to modify outstanding awards under our 2018 plan. Subject to the terms of our 2018 plan, the administrator has the authority to reprice any outstanding option or stock appreciation right, cancel and re-grant any outstanding option or stock appreciation right in exchange for new stock awards, cash or other consideration or take any other action that is treated as a repricing under GAAP with the consent of any adversely affected participant.

Performance Awards

Our 2018 plan permits the grant of performance-based stock and cash awards. Our compensation committee can structure such awards so that the stock or cash will be issued or paid pursuant to such award only following the achievement of specified pre-established performance goals during a designated performance period.

Corporate Transactions

Our 2018 plan provides that in the event of a specified corporate transaction, including without limitation a consolidation, merger or similar transaction involving our company, the sale, lease or other disposition of all or substantially all of the assets of our company or the consolidated assets of our company and our subsidiaries, or a sale or disposition of at least 50% of the outstanding capital stock of our company, the administrator will determine how to treat each outstanding equity award. The administrator may:

- arrange for the assumption, continuation or substitution of a stock award by a successor corporation;
- arrange for the assignment of any reacquisition or repurchase rights held by us to a successor corporation;
- accelerate the vesting of the stock award and provide for its termination prior to the effective time of the corporate transaction;
- arrange for the lapse, in whole or in part, of any reacquisition or repurchase right held by us; or
- cancel the stock award prior to the transaction in exchange for a cash payment, which may be reduced by the exercise price payable in connection with the stock award.

The administrator is not obligated to treat all equity awards or portions of equity awards, even those that are of the same type, in the same manner. The administrator may take different actions with respect to the vested and unvested portions of an equity award.

Change of Control

The administrator may provide, in an individual award agreement or in any other written agreement between us and the participant, that the equity award will be subject to additional acceleration of vesting and exercisability in the event of a change of control. In the absence of such a provision, no such acceleration of the award will occur.

Plan Amendment or Termination

Our board has the authority to amend, suspend or terminate our 2018 plan, provided that such action does not materially impair the existing rights of any participant without such participant's written consent. No incentive stock options may be granted after the tenth anniversary of the date our board of directors adopts our 2018 plan.

2013 Equity Incentive Plan

General

Our board of directors adopted and our stockholders approved our 2013 Equity Incentive Plan, or our 2013 plan, in August 2013. We have subsequently amended our 2013 plan, with the most recent amendment approved by our board of directors on February 20, 2018, the purpose of which was to increase the number of shares available for issuance under our 2013 plan. Our stockholders approved this recent amendment on February 22, 2018. Our 2013 plan will be terminated in connection with our adoption of our 2018 plan; however, awards outstanding under our 2013 plan continue in full effect in accordance with their existing terms.

Share Reserve

As of March 15, 2018, we have reserved 2,639,562 shares of our common stock for issuance under our 2013 plan. As of March 15, 2018, options to purchase 1,981,476 shares of common stock, at exercise prices ranging from $0.52 to $3.80 per share, or a weighted-average exercise price of $ per share, were outstanding under our 2013 plan. As of March 15, 2018, we had also granted 414,616 shares of restricted stock under our 2013 plan.

Administration

Our board of directors has administered our 2013 plan since its adoption, however, following this offering, the compensation committee of our board of directors will generally administer our 2013 plan. Our board of directors has full authority and discretion to make any determinations and take any actions it deems necessary or advisable for the administration of our 2013 plan. Our board of directors may institute the terms and conditions of any program under which outstanding awards are surrendered or cancelled in exchange for awards of the same type, awards of a different type and/or cash, participants would have the opportunity to transfer any outstanding awards to a financial institution or other person or entity selected by the board of directors and/or the exercise price of an outstanding award is reduced or increased.

Types of Awards

Our 2013 plan provides for the grant of restricted shares, incentive stock options, stock appreciation rights and restricted stock units to employees, members of our board of directors and consultants. Incentive stock options may only be granted to employees.

Options

The exercise price of options granted under our 2013 plan may not be less than 100% of the fair market value of our common stock on the grant date. Options expire at the time determined by the administrator, but in no event more than ten years after they are granted, and generally expire earlier if the optionee's service terminates.

Corporate Transactions

In the event of a merger or certain specified change in control transactions, each outstanding stock award will be treated as the plan administrator determines without a participant's consent, including providing that:

- stock awards will be assumed, or substantially equivalent stock awards will be substituted, by the acquiring or succeeding entity with appropriate adjustments as to the number and kind of shares and prices;
- upon written notice to the participant, that the participant's stock awards will terminate upon or immediately prior to the consummation of the merger or change in control;
- outstanding stock awards will vest and become exercisable or payable, or restrictions applicable to the stock awards will lapse, in whole or in part, prior to or upon consummation of the merger or change in control, and to the extent determined by the plan administrator, the stock awards will terminate upon or immediately prior to the merger or change in control;
- the stock award will terminate in exchange for an amount of cash and/or property, if any, equal to the amount that would have been attained upon the exercise of the stock award or realization of the participant's rights with respect to the stock award as of the date of the occurrence of the transaction (including termination for no payment if no amount would have been attained upon exercise of the stock award or realization of the participant's rights with respect to the stock award), or the replacement of the stock award with other rights or property selected by the plan administrator in its sole discretion; or
- any combination of the foregoing.

Our plan administrator is not obligated to treat all stock awards, all stock awards held by a participant, or all stock awards of the same type, in the same manner.

In addition, if the successor entity does not assume or substitute for the stock awards or portion thereof, the participant will fully vest in and have the right to exercise all of his or her outstanding stock awards and all restrictions on outstanding stock awards will lapse, and, with respect to stock options, the plan administrator will notify the participant that the stock options will be exercisable for a period of time as determined by the plan administrator, and will terminate upon the expiration of that period if not exercised. For this purpose, a stock award will be considered assumed if, following the merger or change in control, the stock award provides the right to purchase or receive, for each share subject to the stock award immediately before the merger or change in control, the consideration (including cash, stock or other securities or property) received in the merger or change in control by holders of our common stock generally. If the consideration to be received by the holders of our common stock is not solely common stock of the successor entity or its parent, however, the plan administrator may, with the consent of the successor entity, provide for the consideration to be received upon the exercise or payout of a stock award to be solely common stock of the successor entity or its parent equal in fair market value to the per share consideration received by holders of our common stock in the merger or change in control.

Under the 2013 Plan, a change in control is generally the occurrence of (1) a change in the ownership of the company that occurs on the date that any one person, or more than one person acting as a group, acquires stock of the company that, together with the stock held by the person or group, constitutes more than 50% of the total voting power of our stock, but excluding any change in the ownership of our stock as a result of a private financing that is approved by our board of directors; (2) a change in effective control of the company that occurs on the date that a majority of the members of our board of directors is replaced during any 12-month period by directors whose appointment or election is not endorsed by a majority of the members of our board of directors prior to the date of the appointment or election, provided that if any individual or group is already in effective control of the company, the acquisition of additional control by the same individual or group will not be considered a change in control; or (3) a change in the ownership of a substantial portion of our assets which occurs on the date that any individual or group acquires (or has acquired during the previous twelve month period ending on the date of the most recent acquisition) assets of the company that have a total gross fair market value equal to or more than 50% of the total gross fair market value of all of the company's assets immediately before the acquisition or acquisitions.

Changes in Capitalization

In the event of any dividend or other distribution, recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase or exchange of shares or other securities of our company or other change in the corporate structure of the company affecting shares of common stock, our board of directors, in order to prevent diminution or enlargement of the benefits or potential benefits intended to be made available under the 2013 plan, will adjust the number and class of shares of stock that may be delivered under the 2013 plan and/or the number, class, and price of shares of stock covered by each outstanding award.

Transferability

A participant generally may not transfer stock awards under our 2013 plan other than by will, the laws of descent and distribution, or as otherwise provided under our 2013 plan.

Plan Amendment or Termination. Our board of directors has the authority to amend, alter, suspend or terminate our 2013 plan, provided that such action is approved by our stockholders to the extent stockholder approval is necessary and that such action does not impair the existing rights of any participant without such participant's written consent. As described above, our 2013 plan will terminate upon the effective date of our 2018 plan.

Limitations on Liability and Indemnification Matters

Upon the closing of this offering, our amended and restated certificate of incorporation will contain provisions that limit the liability of our current and former directors for monetary damages to the fullest extent permitted by Delaware law. Delaware law provides that directors of a corporation will not be personally liable for monetary damages for any breach of fiduciary duties as directors, except liability for:

- any breach of the director's duty of loyalty to the corporation or its stockholders;
- any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the Delaware General Corporation Law; or
- any transaction from which the director derived an improper personal benefit.

This limitation of liability does not apply to liabilities arising under federal securities laws and does not affect the availability of equitable remedies such as injunctive relief or rescission.

Our amended and restated certificate of incorporation and our amended and restated bylaws will provide that we are required to indemnify our directors to the fullest extent permitted by Delaware law. Our amended and restated bylaws will also provide that, upon satisfaction of certain conditions, we are required to advance expenses incurred by a director in advance of the final disposition of any action or proceeding, and permit us to secure insurance on behalf of any officer, director, employee or other agent for any liability arising out of his or her actions in that capacity regardless of whether we would otherwise be permitted to indemnify him or her under the provisions of Delaware law. Our amended and restated bylaws will also provide our board of directors with discretion to indemnify our officers and employees when determined appropriate by the board.

We have entered into indemnification agreements with each of our directors and expect to enter into indemnification agreements with each of our executive officers prior to the closing of this offering. With certain exceptions, these agreements provide for indemnification for related expenses including, among other things, attorneys' fees, judgments, fines and settlement amounts incurred by any of these individuals in any action or proceeding. We believe that these bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors. We also maintain customary directors' and officers' liability insurance.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against our directors for breach of their fiduciary duty. They may also reduce the likelihood of derivative litigation against our directors and officers, even though an action, if successful, might benefit us and other stockholders. Further, a stockholder's investment may be adversely affected to the extent that we pay the costs of settlement and damage awards against directors and officers as required by these indemnification provisions. At present, there is no pending litigation or proceeding involving any of our directors, officers or employees for which indemnification is sought and we are not aware of any threatened litigation that may result in claims for indemnification.

Rule 10b5-1 Sales Plans

Our directors and executive officers may adopt written plans, known as Rule 10b5-1 plans, in which they will contract with a broker to buy or sell shares of our common stock on a periodic basis. Under a Rule 10b5-1 plan, a broker executes trades pursuant to parameters established by the director or officer when entering into the plan, without further direction from them. The director or officer may amend a Rule 10b5-1 plan in some circumstances and may terminate a plan at any time. Our directors and executive officers also may buy or sell additional shares outside of a Rule 10b5-1 plan when they are not in possession of material nonpublic information subject to compliance with the terms of our insider trading policy. Prior to 180 days after the date of this offering, subject to early termination, the sale of any shares under such plan would be prohibited by the lock-up agreement that the director or officer has entered into with the underwriters.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

The following is a description of transactions since January 1, 2015 to which we have been a participant in which the amount involved exceeded or will exceed $120,000, and in which any of our directors, executive officers or holders of more than 5% of our voting securities, or any members of their immediate family, had or will have a direct or indirect material interest, other than compensation arrangements which are described under "Executive Compensation."

Sales of Series A Convertible Preferred Stock

In December 2015, we sold an aggregate of 21,302,972 shares of our Series A convertible preferred stock at a price of $0.5194 per share for proceeds of $10.4 million. 19,252,983 shares were sold to PBM VP Holdings, LLC, a beneficial owner of more than 5% of our voting securities, in exchange for approximately $10.0 million in cash, and Paul Manning, a member of our board of directors, has sole voting and dispositive power over the shares held by PBM VP Holdings, LLC. Pursuant to the Series A stock purchase agreement, PBM VP Holdings, LLC paid $1.5 million at closing and $0.5 million and $8.0 million in the years ended December 31, 2016 and 2017, respectively. Sean Stalfort and Jayson Rieger are also members of our board of directors that are affiliated with PBM VP Holdings, LLC. 344,059 shares were sold to Glenn Oclassen, a member of our board of directors, in exchange for approximately $50,000 in cash and the conversion of notes with principal and accrued interest of $102,959. 242,657 shares were jointly sold to Erin and Benjamin Davidson, an immediate family member of Matt Davidson, a director, executive officer and beneficial owner of more than 5% of our voting securities, in exchange for approximately $100,000 in cash and the conversion of notes with principal and accrued interest of $20,828. Each share of Series A convertible preferred stock is convertible into one share of our common stock.

Sales of Series B Convertible Preferred Stock

In December 2017, we sold an aggregate of 1,937,984 shares of our Series B convertible preferred stock at a price of $2.58 per share for aggregate gross proceeds of approximately $5 million to Perceptive Life Sciences Master Fund, Ltd., a beneficial owner of more than 5% of our voting securities. Each share of Series B convertible preferred stock is convertible into one share of our common stock.

Concurrent with the Company's sale of Series B convertible preferred stock, certain affiliates of PBM VP Holdings, LLC, which we refer to as the Co-Investors, including Sean Stalfort and Jayson Rieger, purchased from existing stockholders 500,477 shares of common stock and 176,128 shares of Series A convertible stock. In connection with such investment, such Co-Investors entered into co-investment and cooperation agreements, pursuant to which Paul Manning has sole voting and shared dispositive power over the shares held by the Co-Investors.

Sales of Series C Convertible Preferred Stock

In February 2018, we sold an aggregate of 4,386,926 shares of our Series C convertible preferred stock at a price of $4.559 per share for aggregate gross proceeds of approximately $20 million. 2,193,463 shares were sold to Perceptive Life Sciences Master Fund, Ltd., a beneficial owner of more than 5% of our capital stock, for a purchase price of approximately $10 million. 2,193,463 shares of which were sold to OrbiMed Private Investments VI, LP, a beneficial owner of more than 5% of our capital stock, for a purchase price of approximately $10 million. In March 2018, we sold an additional 219,341 shares to certain other investors, for a purchase price of $1.0 million, including 29,611 shares that were sold to PBM Capital Group, LLC, an affiliate of PBM VP Holdings, LLC. Of the shares acquired by PBM Capital Group, LLC, 3,948 were sold to an unrelated third party and 25,663 shares were distributed to certain Co-Investors. Each share of Series C convertible preferred stock is convertible into one share of our common stock.

Investors' Rights Agreement, Voting Agreement and Right of First Refusal and Co-Sale Agreement

In connection with the sales of convertible preferred stock described above, we entered into an investors' rights agreement, a voting agreement and a right of first refusal and co-sale agreement with the holders of preferred stock, including each of the persons and entities listed in the table above.

The investors' rights agreement, among other things:

- grants our preferred stockholders specified registration rights with respect to shares of our common stock, including shares of common stock issued or issuable upon conversion of the shares of convertible preferred stock held by them;
- obligates us to deliver periodic financial statements to some of the stockholders who are parties to the investors' rights agreement; and
- grants a right of first refusal with respect to sales of our shares by us, subject to specified exclusions, which exclusions include the sale of the shares pursuant to this prospectus, to the stockholders who are parties to the investors' rights agreement.

For more information regarding the registration rights provided in the investors' rights agreement, please refer to the section titled "Description of Capital Stock — Registration Rights." The provisions of this agreement other than those relating to registration rights will terminate upon the closing of this offering.

The voting agreement, among other things, provides for the voting of shares with respect to the constituency of our board of directors and the voting of shares in favor of specified transactions approved by our board of directors and the requisite majority of holders of our outstanding preferred stock. The voting agreement will terminate upon the closing of this offering.

The right of first refusal and co-sale agreement, among other things, grants our investors rights of first refusal and co-sale with respect to proposed transfers of our securities by specified stockholders and grants us rights of first refusal with respect to proposed transfers of our securities by specified stockholders. The right of first refusal and co-sale agreement will terminate upon the closing of this offering.

Services Agreements with PBM Capital Group, LLC

In December 2015, we entered into a services agreement, which we refer to as the PBM Services Agreement, with PBM Capital Group, LLC, an affiliate of PBM VP Holdings, LLC, a beneficial owner of more than 5% of our common stock and an entity controlled by Paul B. Manning, one of our directors, to engage PBM Capital Group, LLC for certain scientific and technical, accounting, operations and back office support services. In March 2018, we entered into an amendment to the PBM Services Agreement, effective April 1, 2018, pursuant to which we are required to pay a flat fee of $50,000 per month for these services. As amended, the PBM Services Agreement has a term until March 31, 2019. Pursuant to the PBM Services Agreement, we paid $30,000 to PBM Capital Group, LLC for each of the years ended December 31, 2016 and December 31, 2017, respectively.

Indemnification Agreements

Our amended and restated certificate of incorporation will contain provisions limiting the liability of directors, and our amended and restated bylaws will provide that we will indemnify each of our directors to the fullest extent permitted under Delaware law. Our amended and restated certificate of incorporation and amended and restated bylaws will also provide our board of directors with discretion to indemnify our officers and employees when determined appropriate by the board.

In addition, we have entered into indemnification agreements with each of our directors, and we expect to enter into indemnification agreements with each of our executive officers prior to the closing of this offering. For more information regarding these agreements, see "Executive Compensation — Limitations on Liability and Indemnification Matters."

Related Person Transaction Policy

Prior to this offering, we have not had a formal policy regarding approval of transactions with related parties. We have adopted a related person transaction policy that sets forth our procedures for the identification, review, consideration and approval or ratification of related person transactions that will become effective immediately upon the execution of the underwriting agreement for this offering. For purposes of our policy only, a related person transaction will be a transaction, arrangement or relationship, or any series of similar transactions, arrangements or relationships, in which we and any related person are, were or will be participants in which the amount involved exceeds $120,000. Transactions involving compensation for services provided to us as an employee or director will not be covered by this policy. A related person will be any executive officer, director or beneficial owner of more than 5% of any class of our voting securities, including any of their immediate family members and any entity owned or controlled by such persons.

Under the policy, if a transaction has been identified as a related person transaction, including any transaction that was not a related person transaction when originally consummated or any transaction that was not initially identified as a related person transaction prior to consummation, our management must present information regarding the related person transaction to our audit committee, or, if audit committee approval would be inappropriate, 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, the material facts, the interests, direct and indirect, of the related persons, the benefits to us of the transaction and whether the transaction is on terms that are comparable to the terms available to or from, as the case may be, an unrelated third party or to or from employees generally. Under the policy, we will collect information that we deem reasonably necessary from each director, executive officer and, to the extent feasible, significant stockholder to enable us to identify any existing or potential related-person transactions and to effectuate the terms of the policy. In addition, under our Code of Conduct that we expect to adopt prior to the closing of this offering, our employees and directors will have an affirmative responsibility to disclose any transaction or relationship that reasonably could be expected to give rise to a conflict of interest. In considering related person transactions, our audit committee, or other independent body of our board of directors, will take into account the relevant available facts and circumstances including:

- the risks, costs and benefits to us;
- the impact on a director's independence in the event that the related person is a director, immediate family member of a director or an entity with which a director is affiliated;
- the availability of other sources for comparable services or products; and
- the terms available to or from, as the case may be, unrelated third parties or to or from employees generally.

The policy will require that, in determining whether to approve, ratify or reject a related person transaction, our audit committee, or other independent body of our board of directors, must consider, in light of known circumstances, whether the transaction is in, or is not inconsistent with, our best interests and those of our stockholders, as our audit committee, or other independent body of our board of directors, determines in the good faith exercise of its discretion.

PRINCIPAL STOCKHOLDERS

The following table sets forth information regarding beneficial ownership of our common stock as of March 15, 2018 by:

- each person, or group of affiliated persons, known by us to beneficially own more than 5% of our common stock;
- each of our directors;
- each of our named executive officers; and
- all of our current executive officers and directors as a group.

We have determined beneficial ownership in accordance with the rules of the SEC. Under these rules, beneficial ownership includes any shares of common stock as to which the individual or entity has sole or shared voting power or investment power. Applicable percentage ownership is based on 34,188,221 shares of common stock outstanding as of March 15, 2018, after giving effect to the conversion of shares of our convertible preferred stock outstanding as of March 15, 2018 into an aggregate of 27,847,223 shares of our common stock immediately prior to the closing of this offering. In computing the number of shares beneficially owned by an individual or entity and the percentage ownership of that person, shares of common stock subject to options held by such person that are currently exercisable or will become exercisable within 60 days of March 15, 2018 are considered outstanding, although these shares are not considered outstanding for purposes of computing the percentage ownership of any other person.

Unless noted otherwise, the address of all listed stockholders is c/o Verrica Pharmaceuticals Inc., .

Each of the stockholders listed has sole voting and investment power with respect to the shares beneficially owned by the stockholder unless noted otherwise, subject to community property laws where applicable.

Name and Address of Beneficial Owner	Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned	
		Before Offering	After Offering
Greater than 5% Stockholders			
Entities affiliated with PBM VP Holdings, LLC (1)	19,955,251	58.4%	
Perceptive Life Sciences Master Fund, Ltd. (2)	4,131,447	12.1	
OrbiMed Private Investments VI, LP (3)	2,193,463	6.4	
Directors and Named Executive Officers			
Ted White	—	—	
Matt Davidson	5,319,783	15.6	
James C. Reebals (4)	63,362	*	
Paul B. Manning (1)	19,955,251	58.4	
Sean Stalfort (4)	63,362	*	
Glenn Oclassen (5)	497,783	1.5	
Jayson Rieger (4)	63,362	*	
All current executive officers and directors as a group (9 persons)	25,903,489	75.8	

* Represents beneficial ownership of less than 1%.

(1) Consists of (a) 19,252,983 shares of common stock issuable upon conversion of preferred stock held by PBM VP Holdings, LLC, (b) an aggregate of 500,477 shares of common stock held by the PBM Co-Investors, and (c) an aggregate of 201,791 shares of common stock issuable upon conversion of preferred stock held by the PBM Co-Investors. Paul B. Manning, one of our directors, has sole voting and investment power with respect to shares held by PBM VP Holdings, LLC and PBM Capital Group, LLC. Mr. Manning also has sole voting power and shared investment power with respect to shares held by the PBM Co-Investors, including 63,362, 63,362 and 63,362 shares held by Mr. Reebals, Mr. Stalfort and Mr. Rieger, respectively. The business address for PBM VP Holdings, LLC and Mr. Manning is 200 Garrett Street, Suite S, Charlottesville, VA 22902.

(2) Consists of 4,131,447 shares of common stock issuable upon conversion of preferred stock held by Perceptive Life Sciences Master Fund, Ltd. The business address for Perceptive Life Sciences Master Fund Ltd. is 51 Astor Place, 10th Floor, New York, NY 10003. Joseph Edelman holds voting and/or dispositive power over the shares held by Perceptive Life Sciences Master Fund Ltd.

(3) Consists of 2,193,463 shares of common stock issuable upon conversion of preferred stock held by OrbiMed Private Investments VI, LP, or OPI VI. OrbiMed Capital GP VI LLC, or GP VI, is the sole general partner of OPI VI. OrbiMed Advisors LLC, or OrbiMed Advisors, is the managing member of GP VI. By virtue of such relationships, GP VI and OrbiMed Advisors may be deemed to have voting and investment power with respect to the shares held by OPI VI and as a result may be deemed to have beneficial ownership of such shares. Advisors exercises investment and voting power through a management committee comprised of Carl L. Gordon, Sven H. Borho and Jonathan T. Silverstein. The address of these entities is 601 Lexington Avenue, 54th floor, New York, New York 10022.

(4) As PBM Co-Investors, Mr. Reebals, Mr. Stalfort and Mr. Rieger have entered into an agreement with PBM VP Holdings, LLC to assign the voting power of his shares to PBM VP Holdings, LLC. Mr. Manning has sole voting power and Mr. Reebals, Mr. Stalfort and Mr. Rieger share investment power with respect to these shares. The business address for Mr. Reebals, Mr. Stalfort and Mr. Rieger is 200 Garrett Street, Suite S, Charlottesville, VA 22902.

(5) Consists of 153,724 shares of common stock and 344,059 shares of common stock issuable upon conversion of preferred stock held by The Glenn A. Oclassen 2016 Trust dated November 30, 2016, for which Mr. Oclassen serves as trustee.

DESCRIPTION OF CAPITAL STOCK

The following description of our capital stock and provisions of our amended and restated certificate of incorporation and amended and restated bylaws to be effective following the completion of this offering are summaries. You should also refer to the amended and restated certificate of incorporation and the amended and restated bylaws, which are filed as exhibits to the registration statement of which this prospectus is part.

General

Upon the completion of this offering, our amended and restated certificate of incorporation will authorize us to issue up to shares of common stock, $0.0001 par value per share, and shares of preferred stock, $0.0001 par value per share, all of which shares of preferred stock will be undesignated. Our board of directors may establish the rights and preferences of the preferred stock from time to time. As of March 15, 2018, we had outstanding 6,340,998 shares of common stock, held by 56 stockholders of record. As of March 15, 2018, after giving effect to the conversion of all of the outstanding shares of our convertible preferred stock into 27,847,223 shares of common stock, there would have been 34,188,221 shares of common stock issued and outstanding, held by 69 stockholders of record.

Common Stock

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, including the election of directors. Under our amended and restated certificate of incorporation and amended and restated bylaws, which will become effective upon consummation of this offering, our stockholders will 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 preferences that may be applicable to any then-outstanding preferred stock, holders of common stock are entitled to receive ratably those dividends, if any, as may be declared from time to time by the board of directors out of legally available funds.

Liquidation

In the event of our liquidation, dissolution or winding up, holders of common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities and the satisfaction of any liquidation preference granted to the holders of any then-outstanding shares of preferred stock.

Rights and Preferences

Holders of common stock have no preemptive, conversion or subscription rights and there are no redemption or sinking fund provisions applicable to the common stock. The rights, preferences and privileges of the holders of common stock are subject to, and may be adversely affected by, the right of the holders of shares of any series of preferred stock that we may designate in the future.

Preferred Stock

As of March 15, 2018, there were outstanding 27,847,223 shares of convertible preferred stock, consisting of 21,302,972 shares of Series A convertible preferred stock, 1,937,984 shares of Series B convertible

preferred stock and 4,606,267 shares of Series C convertible preferred stock. All currently outstanding shares of convertible preferred stock will be converted into an aggregate of 27,847,223 shares of common stock immediately prior to the closing of this offering.

Following the closing of this offering, our board of directors will have the authority under our amended and restated certificate of incorporation, without further action by our stockholders, to issue up to shares of preferred stock in one or more series, to establish from time to time the number of shares to be included in each such series, to fix the rights, preferences and privileges of the shares of each wholly unissued series and any qualifications, limitations or restrictions thereon, and to increase or decrease the number of shares of any such series, but not below the number of shares of such 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 our 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 us and may adversely affect the market price of our common stock and the voting and other rights of the holders of our 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 present plans to issue any shares of preferred stock following completion of this offering.

Options

As of March 15, 2018, under our 2013 plan, options to purchase an aggregate of 1,981,476 shares of common stock were outstanding. For additional information regarding the terms of this plan, see “Executive Compensation — Equity Incentive Plans.”

Registration Rights

We, the holders of our existing convertible preferred stock and certain holders of our existing common stock have entered into an amended and restated investors’ rights agreement. The registration rights provisions of this agreement provide those holders with demand, piggyback and Form S-3 registration rights with respect to the shares of common stock currently held by them and issuable to them upon conversion of our convertible preferred stock in connection with our initial public offering.

Demand Registration Rights

At any time after the earlier of February 20, 2022 and the date that is six months following the effective date of the registration statement of which this prospectus is a part, the holders of at least a majority of the outstanding registrable securities, two-thirds of the outstanding shares of Series A convertible preferred stock, two-thirds of the outstanding shares of Series B convertible preferred stock or two-thirds of the outstanding shares of Series C convertible preferred stock have the right to demand that we file a registration statement with respect to at least a majority of the registrable securities outstanding, or a lesser percent if the anticipated aggregate offering price, net of underwriting discounts and commissions, would exceed $15.0 million. These registration rights are subject to specified conditions and limitations, including the right of the underwriters, if any, 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 soon as practicable, but in any event no later than 90 days after the receipt of such request. An aggregate of 33,167,006 shares of common stock will be entitled to these demand registration rights.

Piggyback Registration Rights

If we propose to register any of our securities under the Securities Act either for our own account or for the account of other stockholders, the holders of registrable securities will each be entitled to notice of the registration and will be entitled to include their shares of common stock 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. An aggregate of 33,167,006 shares of common stock will be entitled to these piggyback registration rights.

Registration on Form S-3

At any time after we become eligible to file a registration statement on Form S-3, the holders of at least a majority of the outstanding registrable securities, two-thirds of the outstanding shares of Series A convertible preferred stock, two-thirds of the outstanding shares of Series B convertible preferred stock or two-thirds of the outstanding shares of Series C convertible preferred stock will be entitled to request to have such shares registered by us on a Form S-3 registration statement. These Form S-3 registration rights are subject to other specified conditions and limitations, including the condition that the anticipated aggregate offering price, net of underwriting discounts and commissions, exceeds $5.0 million. Upon receipt of this request, the holders of registrable securities will each be entitled to participate in this registration. An aggregate of 33,167,006 shares of common stock will be entitled to these Form S-3 registration rights.

Expenses of Registration

We are required to pay all expenses, including fees and expenses of one counsel to represent the selling stockholders (up to $75,000 total), relating to any demand, piggyback or Form S-3 registration, other than underwriting discounts and commissions, stock transfer taxes and any additional fees of counsel for the selling stockholders, subject to specified conditions and limitations. We are not required to pay registration expenses if a demand registration request is withdrawn at the request of a majority of holders of registrable securities to be registered, unless holders of a majority of the registrable securities agree to forfeit their right to one demand registration.

The investors' 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 applicable registration statement attributable to us, and the selling stockholders are obligated to indemnify us for material misstatements or omissions in the registration statement attributable to them, subject to certain limitations.

Termination of Registration Rights

The registration rights granted under the investors' rights agreement will terminate upon the earlier of the fifth anniversary of the closing of this offering or a liquidation event.

Anti-Takeover Provisions

Section 203 of the Delaware General Corporation Law

We are subject to Section 203 of the Delaware General Corporation Law, which prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years after the date that such stockholder became an interested stockholder, with the following exceptions:

- before such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;

- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction began, excluding for purposes of determining the voting stock outstanding, but not the outstanding voting stock owned by the interested stockholder, those shares owned (i) by persons who are directors and also officers and (ii) 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 after such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of the stockholders, and not by written consent, by the affirmative vote of at least 66 ⅔% of the outstanding voting stock that is not owned by the interested stockholder.

In general, Section 203 defines a "business combination" to include the following:

- any merger or consolidation involving the corporation or any direct or indirect majority-owned subsidiary of the corporation and the interested stockholder;

- any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder (in one transaction or a series of transactions);

- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation or by any direct or indirect majority-owned subsidiary of the corporation of any stock of the corporation or of such subsidiary to the interested stockholder;

- any transaction involving the corporation or any direct or indirect majority-owned subsidiary of the corporation that has the effect of increasing the proportionate share of the stock or any class or series of the corporation beneficially owned by the interested stockholder; or

- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits by or through the corporation.

In general, Section 203 defines an "interested stockholder" as an entity or person who, together with the person's affiliates and associates, beneficially owns, or within three years prior to the time of determination of interested stockholder status did own, 15% or more of the outstanding voting stock of the corporation.

Certificate of Incorporation and Bylaws to be in Effect upon the Closing of this Offering

Our amended and restated certificate of incorporation to be in effect upon the completion of this offering, or our restated certificate, will provide for our board of directors to be divided into three classes with staggered three-year terms. Only one class of directors will be elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms. Because our stockholders do not have cumulative voting rights, stockholders holding a majority of the shares of common stock outstanding will be able to elect all of our directors. Our restated certificate and our amended and restated bylaws to be effective upon the completion of this offering, or our restated bylaws, will also provide that directors may be removed by the stockholders only for cause upon the vote of 66 ⅔% or more of our outstanding common stock. Furthermore, the authorized number of directors may be changed only by resolution of the board of directors, and vacancies and newly created directorships on the board of directors may, except as otherwise required by law or determined by the board, only be filled by a majority vote of the directors then serving on the board, even though less than a quorum.

Our restated certificate and restated bylaws will also provide that all stockholder actions must be effected at a duly called meeting of stockholders and will eliminate the right of stockholders to act by written consent without a meeting. Our restated bylaws will also provide that only our Chairman of the board, Chief Executive Officer or the board of directors pursuant to a resolution adopted by a majority of the total number of authorized directors may call a special meeting of stockholders.

Our restated bylaws will also provide that stockholders seeking to present proposals before a meeting of stockholders to nominate candidates for election as directors at a meeting of stockholders must provide timely advance notice in writing, and will specify requirements as to the form and content of a stockholder's notice.

Our restated certificate and restated bylaws will provide that the stockholders cannot amend many of the provisions described above except by a vote of 66 2/3% or more of our outstanding common stock. As described in "—Preferred Stock" above, our restated certificate will give our board of directors the authority, without further action by our stockholders, to issue up to shares of preferred stock in one or more series.

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 restated certificate will provide that the Court of Chancery of the state of Delaware 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 restated certificate, 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 restated certificate to be inapplicable or unenforceable in such action.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is . The transfer agent's address is .

Stock Exchange Listing

We intend to apply for listing of our common stock on The Nasdaq Global Market under the trading symbol " ."

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, no public market existed for our common stock. Future sales of our common stock in the public market, or the availability of such shares for sale in the public market, could adversely affect market prices prevailing from time to time. As described below, only a limited number of shares will be available for sale shortly after this offering due to contractual and legal restrictions on resale. Nevertheless, sales of our common stock in the public market after such restrictions lapse, or the perception that those sales may occur, could adversely affect the prevailing market price at such time and our ability to raise equity capital in the future.

Based on the number of shares outstanding as of , upon the closing of this offering and assuming no exercise of the underwriters' option to purchase additional shares, shares of common stock will be outstanding, assuming no outstanding options are exercised. All of the shares of common stock sold in this offering will be freely tradable without restrictions or further registration under the Securities Act, except for any shares sold to our "affiliates," as that term is defined under Rule 144 under the Securities Act. The remaining shares of common stock held by existing stockholders are "restricted securities," as that term is defined in Rule 144 under the Securities Act. Restricted securities may be sold in the public market only if registered or if their resale qualifies for exemption from registration described below under Rule 144 promulgated under the Securities Act or another available exemption.

As a result of the lock-up agreements described below and the provisions of Rules 144 and 701 under the Securities Act, the shares of common stock that will be deemed restricted securities after this offering will be available for sale in the public market as follows:

- none of the existing restricted shares will be eligible for immediate sale upon the completion of this offering; and
- restricted shares will be eligible for sale in the public market upon expiration of lock-up agreements 180 days after the date of this prospectus, subject in certain circumstances to the volume, manner of sale and other limitations under Rule 144 and Rule 701 under the Securities Act, which are summarized below.

Rule 144

In general, non-affiliate persons who have beneficially owned restricted shares of our common stock for at least six months, and any affiliate of the company who owns either restricted or unrestricted shares of our common stock, are entitled to sell their securities without registration with the SEC under an exemption from registration provided by Rule 144 under the Securities Act.

Non-Affiliates

Any person who is not deemed to have been one of our affiliates at the time of, or at any time during the three months preceding, a sale may sell an unlimited number of restricted securities under Rule 144 if:

- the restricted securities have been held for at least six months, including the holding period of any prior owner other than one of our affiliates (subject to certain exceptions);
- we have been subject to the Exchange Act periodic reporting requirements for at least 90 days before the sale; and
- we are current in our Exchange Act reporting at the time of sale.

Any person who is not deemed to have been an affiliate of ours at the time of, or at any time during the three months preceding, a sale and has held the restricted securities for at least one year, including the holding

period of any prior owner other than one of our affiliates, will be entitled to sell an unlimited number of restricted securities without regard to the length of time we have been subject to Exchange Act periodic reporting or whether we are current in our Exchange Act reporting. Non-affiliate resales are not subject to the manner of sale, volume limitation or notice filing provisions of Rule 144.

Affiliates

Persons seeking to sell restricted securities who are our affiliates at the time of, or any time during the three months preceding, a sale, would be subject to the restrictions described above. They are also subject to additional restrictions, by which such person would be required to comply with the manner of sale and notice provisions of Rule 144 and would be entitled to sell within any three-month period only that number of securities that does not exceed the greater of either of the following:

- 1% of the number of shares of our common stock then outstanding, which will equal approximately shares immediately after the completion of this offering based on the number of shares outstanding as of ; or
- the average weekly trading volume of our common stock on the stock exchange on which our shares are listed during the four calendar weeks preceding the filing of a notice on Form 144 with respect to the sale.

Additionally, persons who are our affiliates at the time of, or any time during the three months preceding, a sale may sell unrestricted securities under the requirements of Rule 144 described above, without regard to the six month holding period of Rule 144, which does not apply to sales of unrestricted securities.

Rule 701

Rule 701 under the Securities Act, as in effect on the date of this prospectus, permits resales of shares in reliance upon Rule 144 but without compliance with certain restrictions of Rule 144, including the holding period requirement. Most of our employees, executive officers or directors who purchased shares under a written compensatory plan or contract may be entitled to rely on the resale provisions of Rule 701, but all holders of Rule 701 shares are required to wait until 90 days after the date of this prospectus before selling their shares. However, substantially all Rule 701 shares are subject to lock-up agreements as described below and in the section titled “Underwriting” and will become eligible for sale upon the expiration of the restrictions set forth in those agreements.

Form S-8 Registration Statements

We intend to file one or more registration statements on Form S-8 under the Securities Act to register all shares of common stock subject to outstanding stock options and common stock issued or issuable under our 2013 plan and 2018 plan. We expect to file the registration statement covering shares offered pursuant to our stock plans as soon as practicable after the closing of this offering, permitting the resale of such shares by non-affiliates in the public market without restriction under the Securities Act and the sale by affiliates in the public market, subject to compliance with the resale provisions of Rule 144 and expiration or release from the terms of the lock-up agreements described above.

Lock-up Agreements

We, our executive officers and directors and substantially all of the holders of our common stock outstanding on the date of this prospectus have entered into lock-up agreements with the underwriters or otherwise agreed, subject to certain exceptions, that we and they will not, directly or indirectly, offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale, or otherwise dispose of or hedge any

of our shares of common stock, any options or warrants to purchase shares of our common stock, or any securities convertible into, or exchangeable for or that represent the right to receive shares of our common stock, without the prior written consent of Merrill Lynch, Pierce, Fenner & Smith Incorporated and Jefferies LLC for a period of 180 days from the date of this prospectus.

Registration Rights

Upon the closing of this offering, the holders of 33,167,006 shares of our common stock, including common stock issuable upon the conversion of our preferred stock, or their transferees, will be entitled to specified rights with respect to the registration of their registrable shares under the Securities Act, subject to certain limitations and the expiration, waiver or termination of the lock-up agreements. Registration of these shares under the Securities Act would result in the shares becoming freely tradable without restriction under the Securities Act immediately upon effectiveness of the registration. See “Description of Capital Stock—Registration Rights” for additional information.

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS

The following is a discussion of the material U.S. federal income tax considerations applicable to non-U.S. holders (as defined below) with respect to their ownership and disposition of shares of our common stock issued pursuant to this offering, but does not purport to be a complete analysis of all potential tax effects. All prospective non-U.S. holders of our common stock should consult their own tax advisors with respect to the U.S. federal income tax consequences of the purchase, ownership and disposition of our common stock, as well as any consequences arising under the U.S. estate tax or under the laws of any other taxing jurisdiction, including any state, local and non-U.S. tax consequences and any U.S. federal non-income tax consequences. In general, a non-U.S. holder means a beneficial owner of our common stock (other than 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 for U.S. federal income tax purposes, 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, which we refer to as the Code, existing U.S. Treasury Regulations promulgated thereunder, published administrative rulings and judicial decisions, all as in effect as of the date of this prospectus supplement. These laws 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 supplement.

This discussion is limited to non-U.S. holders that hold shares of our common stock as a capital asset within the meaning of Section 1221 of the Code (generally, 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 aspects of U.S. estate or gift tax, or any 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 corporations that accumulate earnings to avoid U.S. federal income tax, tax-exempt organizations or governmental organizations, banks, financial institutions, insurance companies, brokers, dealers or traders in securities, commodities or currencies, tax-qualified retirement plans, holders subject to the alternative minimum tax or Medicare contribution tax, holders holding our common stock as part of a hedge, straddle or other risk reduction strategy, conversion transaction or other integrated investment, holders deemed to sell our common stock under the constructive sale provisions of the Code, controlled foreign corporations, passive foreign investment companies, persons subject to special tax accounting rules as a result of any item of gross income with respect to the stock being taken into account in an applicable financial statement, persons who hold or receive our common stock pursuant to the exercise of any employee stock option or otherwise as compensation, tax-qualified retirement plans, "qualified foreign pension funds" as defined in Section 897(l)(2) of the Code and entities all of the interests of which are held by qualified foreign pension funds, and U.S. expatriates and certain former citizens or long-term residents of the United States.

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 such partnerships or such entities or arrangements. 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, the activities of the partnership and certain determinations made at the partner level. Such partners and partnerships should consult their own tax advisors regarding the tax consequences of the purchase, ownership and disposition of our common stock.

There can be no assurance that the Internal Revenue Service, which we refer to as 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 with respect to the U.S. federal income tax consequences with respect to the matters discussed below.

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."

Subject to the discussions below regarding effectively connected income, backup withholding and foreign accounts, dividends paid to a non-U.S. holder will generally be subject to withholding of U.S. federal income tax at a 30% rate on the gross amount of the dividends, or such lower rate as may be specified by an applicable income tax treaty. A non-U.S. holder that is eligible for a reduced rate of U.S. withholding tax under an income tax treaty may obtain a refund or credit of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS. A non-U.S. holder of our common stock who claims the benefit of an applicable income tax treaty generally will be required to provide a properly executed IRS Form W-8BEN or W-8BEN-E (or successor form) and satisfy relevant certification and other requirements. Non-U.S. holders are urged to consult their tax advisors regarding their entitlement to benefits under a relevant 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. To claim the exemption, the non-U.S. holder must generally furnish to us or the applicable withholding agent 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 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. Non-U.S. holders should consult their tax advisors regarding their entitlement to benefits under any applicable tax treaties.

Gain on Sale, Exchange or Other Disposition of our Common Stock

Subject to the discussions 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 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" may also 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), provided the non-U.S. holder has timely filed U.S. federal income tax returns with respect to such losses; 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." Even if we are or become a U.S. real property holding corporation, provided that our common stock is regularly traded 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 five-year period ending on the date of the disposition or the period that the non-U.S. holder held our common stock. In such case, such non-U.S. holder generally will be taxed on its net gain derived from the disposition at the graduated U.S. federal income tax rates applicable to U.S. persons (as defined in the Code), except that the branch profits tax will not apply. 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. We expect that our common stock will be regularly traded on an established securities market, but no assurance can be provided that our common stock will be regularly traded.

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. Non-U.S. holders 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. U.S. backup withholding generally will not apply to a non-U.S. holder who provides a properly executed IRS Form W-8BEN, W-8BEN-E, W8ECI or otherwise establishes an exemption.

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 non-U.S. broker. However, for information reporting purposes, dispositions effected through a non-U.S. office of a non-U.S. 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 own 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 Account Tax Compliance Act

The Code 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 in the Code 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 may include certain equity and debt holders of such institution, as well as certain account holders that are foreign entities with U.S. owners). Foreign financial institutions located in jurisdictions that have an intergovernmental agreement with the United States governing these withholding and reporting requirements may be subject to different rules. This U.S. federal withholding tax of 30% also applies to dividends and the gross proceeds of a disposition of our common stock paid to a "non-financial foreign entity" (as specifically 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 information regarding substantial direct and indirect U.S. owners of the entity. The withholding tax described above will not apply if the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from the rules. The withholding provisions described above currently apply to dividends on our common stock and will apply with respect to gross proceeds of a sale or other disposition of our common stock on or after January 1, 2019. Under certain circumstances, a non-U.S. holder might be eligible for refunds or credits of such taxes. Non-U.S. holders are encouraged to consult with their own tax advisors regarding the possible implications of the legislation on their investment in our common stock.

EACH PROSPECTIVE INVESTOR SHOULD CONSULT ITS OWN TAX ADVISOR REGARDING THE TAX CONSEQUENCES OF PURCHASING, HOLDING AND DISPOSING OF OUR COMMON STOCK, INCLUDING THE CONSEQUENCES OF ANY PROPOSED OR RECENTLY ENACTED CHANGE IN APPLICABLE LAW, AS WELL AS TAX CONSEQUENCES ARISING UNDER ANY STATE, LOCAL, NON-U.S. OR U.S. FEDERAL NON-INCOME TAX LAWS.

UNDERWRITING

Merrill Lynch, Pierce, Fenner & Smith Incorporated, Jefferies LLC and Cowen and Company, LLC are acting as representatives of each of the underwriters named below. Subject to the terms and conditions set forth in an underwriting agreement among us and the underwriters, we have agreed to sell to the underwriters, and each of the underwriters has agreed, severally and not jointly, to purchase from us, the number of shares of common stock set forth opposite its name below.

Underwriter	Number of Shares
Merrill Lynch, Pierce, Fenner & Smith Incorporated	
Jefferies LLC	
Cowen and Company, LLC	
Total	

Subject to the terms and conditions set forth in the underwriting agreement, the underwriters have agreed, severally and not jointly, to purchase all of the shares sold under the underwriting agreement if any of these shares are purchased. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the nondefaulting underwriters may be increased or the underwriting agreement may be terminated.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act, or to contribute to payments the underwriters may be required to make in respect of those liabilities.

The underwriters are offering the shares, subject to prior sale, when, as and if issued to and accepted by them, subject to approval of legal matters by their counsel, including the validity of the shares, and other conditions contained in the underwriting agreement, such as the receipt by the underwriters of officer's certificates and legal opinions. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

Commissions and Discounts

The representatives have advised us that the underwriters propose initially to offer the shares to the public at the public offering price set forth on the cover page of this prospectus and to dealers at that price less a concession not in excess of $ per share. After the initial offering, the public offering price, concession or any other term of the offering may be changed.

The following table shows the public offering price, underwriting discount and proceeds before expenses to us. The information assumes either no exercise or full exercise by the underwriters of their option to purchase additional shares.

	Per Share	Without Option	With Option
Public offering price	$	$	$
Underwriting discount	$	$	$
Proceeds, before expenses, to us	$	$	$

The expenses of the offering, not including the underwriting discount, are estimated at $ and are payable by us. We have also agreed to reimburse the underwriters for their expenses relating to clearance of this offering with the Financial Industry Regulatory Authority in an amount up to $.

Option to Purchase Additional Shares

We have granted an option to the underwriters, exercisable for 30 days after the date of this prospectus, to purchase up to additional shares at the public offering price, less the underwriting discount. If the underwriters exercise this option, each will be obligated, subject to conditions contained in the underwriting agreement, to purchase a number of additional shares proportionate to that underwriter's initial amount reflected in the above table.

No Sales of Similar Securities

We, our executive officers and directors and substantially all of our other existing security holders have agreed not to sell or transfer any common stock or securities convertible into, exchangeable for, exercisable for, or repayable with common stock, for 180 days after the date of this prospectus without first obtaining the written consent of Merrill Lynch, Pierce, Fenner & Smith Incorporated and Jefferies LLC. Specifically, we and these other persons have agreed, with certain limited exceptions, not to directly or indirectly

- offer, pledge, sell or contract to sell any common stock,
- sell any option or contract to purchase any common stock,
- purchase any option or contract to sell any common stock,
- grant any option, right or warrant for the sale of any common stock,
- lend or otherwise dispose of or transfer any common stock,
- request or demand that we file or make a confidential submission of a registration statement related to the common stock, or
- enter into any swap or other agreement that transfers, in whole or in part, the economic consequence of ownership of any common stock whether any such swap or transaction is to be settled by delivery of shares or other securities, in cash or otherwise.

This lock-up provision applies to common stock and to securities convertible into or exchangeable or exercisable for or repayable with common stock. It also applies to common stock owned now or acquired later by the person executing the agreement or for which the person executing the agreement later acquires the power of disposition.

Nasdaq Global Market Listing

We intend to apply for listing of our common stock on The Nasdaq Global Market under the symbol " ."

Before this offering, there has been no public market for our common stock. The initial public offering price will be determined through negotiations between us and the representatives. In addition to prevailing market conditions, the factors to be considered in determining the initial public offering price are

- the valuation multiples of publicly traded companies that the representatives believe to be comparable to us,
- our financial information,
- the history of, and the prospects for, our company and the industry in which we compete,

- an assessment of our management, its past and present operations, and the prospects for, and timing of, our future revenues,
- the present state of our development, and
- the above factors in relation to market values and various valuation measures of other companies engaged in activities similar to ours.

An active trading market for the shares may not develop. It is also possible that after the offering the shares will not trade in the public market at or above the initial public offering price.

The underwriters do not expect to sell more than 5% of the shares in the aggregate to accounts over which they exercise discretionary authority.

Price Stabilization, Short Positions and Penalty Bids

Until the distribution of the shares is completed, SEC rules may limit underwriters and selling group members from bidding for and purchasing our common stock. However, the representatives may engage in transactions that stabilize the price of the common stock, such as bids or purchases to peg, fix or maintain that price.

In connection with the offering, the underwriters may purchase and sell our common stock in the open market. These transactions may include short sales, purchases on the open market to cover positions created by short sales and stabilizing transactions. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in the offering. "Covered" short sales are sales made in an amount not greater than the underwriters' option to purchase additional shares described above. The underwriters may close out any covered short position by either exercising their option to purchase additional shares or purchasing shares 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 granted to them. "Naked" short sales are sales in excess of such option. 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 our common stock in the open market after pricing that could adversely affect investors who purchase in the offering. Stabilizing transactions consist of various bids for or purchases of shares of common stock made by the underwriters in the open market prior to the completion of the offering.

The underwriters may also impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discount received by it because the representatives have repurchased shares sold by or for the account of such underwriter in stabilizing or short covering transactions.

Similar to other purchase transactions, the underwriters' 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. The underwriters may conduct these transactions on The Nasdaq Global Market, in the over-the-counter market or otherwise.

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. In addition, neither we nor any of the underwriters make any representation that the representatives will engage in these transactions or that these transactions, once commenced, will not be discontinued without notice.

Electronic Distribution

In connection with the offering, certain of the underwriters or securities dealers may distribute prospectuses by electronic means, such as e-mail.

Other Relationships

Some of the underwriters and their affiliates have engaged in, and may in the future engage in, investment banking and other commercial dealings in the ordinary course of business with us or our affiliates. They have received, or may in the future receive, customary fees and commissions for these transactions.

In addition, in the ordinary course of their business activities, the underwriters and 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. Such investments and securities activities may involve securities and/or instruments of ours or our affiliates. The underwriters and their affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or financial instruments and may hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

European Economic Area

In relation to each member state of the European Economic Area, no offer of ordinary shares which are the subject of the offering has been, or will be made to the public in that Member State, other than under the following exemptions under the Prospectus Directive:

(a) to any legal entity which is a qualified investor as defined in the Prospectus Directive;

(b) to fewer than 150 natural or legal persons (other than qualified investors as defined in the Prospectus Directive), subject to obtaining the prior consent of the Representatives for any such offer; or

(c) in any other circumstances falling within Article 3(2) of the Prospectus Directive,

provided that no such offer of ordinary shares referred to in (a) to (c) above shall result in a requirement for the Company or any Representative to publish a prospectus pursuant to Article 3 of the Prospectus Directive, or supplement a prospectus pursuant to Article 16 of the Prospectus Directive.

Each person located in a Member State to whom any offer of ordinary shares is made or who receives any communication in respect of an offer of ordinary shares, or who initially acquires any ordinary shares will be deemed to have represented, warranted, acknowledged and agreed to and with each Representative and the Company that (1) it is a "qualified investor" within the meaning of the law in that Member State implementing Article 2(1)(e) of the Prospectus Directive; and (2) in the case of any ordinary shares acquired by it as a financial intermediary as that term is used in Article 3(2) of the Prospectus Directive, the ordinary shares acquired by it in the offer have not been acquired on behalf of, nor have they been acquired with a view to their offer or resale to, persons in any Member State other than qualified investors, as that term is defined in the Prospectus Directive, or in circumstances in which the prior consent of the Representatives has been given to the offer or resale; or where ordinary shares have been acquired by it on behalf of persons in any Member State other than qualified investors, the offer of those ordinary shares to it is not treated under the Prospectus Directive as having been made to such persons.

The Company, the Representatives and their respective affiliates will rely upon the truth and accuracy of the foregoing representations, acknowledgments and agreements.

This prospectus has been prepared on the basis that any offer of shares in any Member State will be made pursuant to an exemption under the Prospectus Directive from the requirement to publish a prospectus for offers of shares. Accordingly any person making or intending to make an offer in that Member State of shares which are the subject of the offering contemplated in this prospectus may only do so in circumstances in which no obligation arises for the Company or any of the Representatives to publish a prospectus pursuant to Article 3 of the Prospectus Directive in relation to such offer. Neither the Company nor the Representatives have authorized, nor do they authorize, the making of any offer of shares in circumstances in which an obligation arises for the Company or the Representatives to publish a prospectus for such offer.

For the purposes of this provision, the expression an "offer of ordinary shares to the public" in relation to any ordinary shares in any Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the ordinary shares to be offered so as to enable an investor to decide to purchase or subscribe the ordinary shares, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State, the expression "Prospectus Directive" means Directive 2003/71/EC (as amended) and includes any relevant implementing measure in each Member State.

The above selling restriction is in addition to any other selling restrictions set out below.

Notice to Prospective Investors in the United Kingdom

In addition, in the United Kingdom, this document is being distributed only to, and is directed only at, and any offer subsequently made may only be directed at persons who are "qualified investors" (as defined in the Prospectus Directive) (i) who have professional experience in matters relating to investments falling within Article 19 (5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the "Order") and/or (ii) who are high net worth companies (or persons to whom it may otherwise be lawfully communicated) falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as "relevant persons"). This document must not be acted on or relied on in the United Kingdom by persons who are not relevant persons. In the United Kingdom, any investment or investment activity to which this document relates is only available to, and will be engaged in with, relevant persons.

Notice to Prospective Investors in Switzerland

The shares may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange ("SIX") or on any other stock exchange or regulated trading facility in Switzerland. This document 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 document nor any other offering or marketing material relating to the shares or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

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

Notice to Prospective Investors in the Dubai International Financial Centre

This prospectus relates to an Exempt Offer in accordance with the Offered Securities Rules of the Dubai Financial Services Authority ("DFSA"). This prospectus is intended for distribution only to persons of a type

specified in the Offered Securities Rules of the DFSA. It must not be delivered to, or relied on by, any other person. The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved this prospectus nor taken steps to verify the information set forth herein and has no responsibility for the prospectus. The shares to which this prospectus relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the shares offered should conduct their own due diligence on the shares. If you do not understand the contents of this prospectus you should consult an authorized financial advisor.

Notice to Prospective Investors in Australia

No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission ("ASIC"), in relation to the offering. This prospectus does not constitute a prospectus, product disclosure statement or other disclosure document under the Corporations Act 2001 (the "Corporations Act"), and does not purport to include the information required for a prospectus, product disclosure statement or other disclosure document under the Corporations Act.

Any offer in Australia of the shares may only be made to persons (the "Exempt Investors") who are "sophisticated investors" (within the meaning of section 708(8) of the Corporations Act), "professional investors" (within the meaning of section 708(11) of the Corporations Act) or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the shares without disclosure to investors under Chapter 6D of the Corporations Act.

The shares applied for by Exempt Investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document which complies with Chapter 6D of the Corporations Act. Any person acquiring shares must observe such Australian on-sale restrictions.

This prospectus contains general information only and does not take account of the investment objectives, financial situation or particular needs of any particular person. It does not contain any securities recommendations or financial product advice. Before making an investment decision, investors need to consider whether the information in this prospectus is appropriate to their needs, objectives and circumstances, and, if necessary, seek expert advice on those matters.

Notice to Prospective Investors in Hong Kong

The shares have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (a) to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance; or (b) 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 that Ordinance. No advertisement, invitation or document relating to the shares has been or may be issued or has been or may be in the possession of any person for the purposes of issue, 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 to do so under the securities laws of Hong Kong) other than with respect to shares 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 and any rules made under that Ordinance.

Notice to Prospective Investors in Japan

The shares have not been and will not be registered under the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948, as amended) and, accordingly, will not be offered or sold, directly or indirectly, in

Japan, or for the benefit of any Japanese Person or to others for re-offering or resale, directly or indirectly, in Japan or to any Japanese Person, except in compliance with all applicable laws, regulations and ministerial guidelines promulgated by relevant Japanese governmental or regulatory authorities in effect at the relevant time. For the purposes of this paragraph, "Japanese Person" shall mean any person resident in Japan, including any corporation or other entity organized under the laws of Japan.

Notice to Prospective Investors in Singapore

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

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

(a) a corporation (which is not an accredited investor (as defined in 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

(b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities (as defined in Section 239(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares pursuant to an offer made under Section 275 of the SFA except:

(a) to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;

(b) where no consideration is or will be given for the transfer;

(c) where the transfer is by operation of law;

(d) as specified in Section 276(7) of the SFA; or

(e) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore.

Notice to Prospective Investors in Canada

The shares may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 *Prospectus Exemptions* or subsection 73.3(1) of the *Securities Act* (Ontario), and are permitted clients, as defined in National Instrument 31-103 *Registration Requirements, Exemptions and Ongoing Registrant Obligations*. Any resale of the shares must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) 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 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.

Pursuant to section 3A.3 (or, in the case of securities issued or guaranteed by the government of a non-Canadian jurisdiction, section 3A.4) of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

LEGAL MATTERS

The validity of the shares of common stock offered hereby will be passed upon for us by Cooley LLP, New York, New York. As of the date of this prospectus, a partner of Cooley LLP beneficially owns an aggregate of 8,444 shares of common stock and 2,972 shares of common stock issuable upon conversion shares of our Series A preferred stock. Certain legal matters will be passed upon for the underwriters by Latham & Watkins LLP, New York, New York.

EXPERTS

The financial statements of Verrica Pharmaceuticals Inc. as of December 31, 2016 and 2017, and for each of the years in the two-year period ended December 31, 2017 have been included herein and in the registration statement in reliance on the report of KPMG LLP, independent registered public accounting firm, appearing elsewhere herein, and upon the authority of said 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 under the Securities Act, with respect to the shares of 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 our company 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 room at 100 F Street, N.E., Room 1580, 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, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference facilities.

Upon completion of this offering, we will be subject to the information reporting requirements of the Exchange Act, and we will 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 website of the SEC referred to above. We also maintain a website at www.verrica.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. The information contained in, or that can be accessed through, our website is not part of, and is not incorporated into, this prospectus.

VERRICA PHARMACEUTICALS INC.
Index to Financial Statements

Report of Independent Registered Public Accounting Firm

To the Board of Directors
Verrica Pharmaceuticals Inc.:

Opinion on the Financial Statements

We have audited the accompanying balance sheets of Verrica Pharmaceuticals Inc. (the Company) as of December 31, 2017 and 2016, the related statements of operations, convertible preferred stock and stockholders' deficit, and cash flows for each of the years in the two-year period ended December 31, 2017, and the related notes (collectively, the financial statements). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2016, and the results of its operations and its cash flows for each of the years in the two-year period ended December 31, 2017, in conformity with U.S. generally accepted accounting principles.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ KPMG LLP

We have served as the Company's auditor since 2017.

Richmond, Virginia
March 30, 2018

VERRICA PHARMACEUTICALS INC.
BALANCE SHEETS
(in thousands, except share and per share amounts)

	December 31,		Pro Forma Liabilities and Stockholders' Equity December 31, 2017 (unaudited)
	2016	2017	
ASSETS			
Current Assets:			
Cash	$ 527	$ 8,663	$ 8,663
Prepaid expenses and other assets	17	420	420
Total current assets	544	9,083	9,083
Total assets	$ 544	$ 9,083	$ 9,083
LIABILITIES, CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT			
Current Liabilities:			
Accounts payable	$ 67	$ 153	$ 153
Accrued expenses	316	449	449
Accounts payable and accrued expenses—related party	36	14	14
Total current liabilities	419	616	616
Total liabilities	419	616	616
Commitments and Contingencies			
Convertible preferred stock—Series A—21,302,972 shares authorized, issued and outstanding as of December 31, 2016 and 2017, net of stock subscription receivable of $8,000 and $0 as of December 31, 2016 and 2017, respectively; liquidation preference of $11,065 as of December 31, 2017	2,789	10,508	—
Convertible preferred stock—Series B—0 shares authorized, issued and outstanding as of December 31, 2016 and 1,937,984 shares authorized, issued and outstanding as of December 31, 2017; liquidation preference of $5,000 as of December 31, 2017	—	5,000	—
Total convertible preferred stock	2,789	15,508	—
Stockholders' deficit:			
Common stock, $0.0001 par value; 29,100,000 and 33,236,900 shares authorized; 6,521,215 shares issued and 6,340,998 shares outstanding as of December 31, 2016 and 2017	1	1	3
Treasury stock, at cost, 180,217 shares as of December 31, 2016 and 2017	—	—	—
Additional paid-in capital	11	5,393	20,899
Accumulated deficit	(2,676)	(12,435)	(12,435)
Total stockholders' deficit	(2,664)	(7,041)	8,467
Total liabilities, convertible preferred stock and stockholders' deficit	$ 544	$ 9,083	$ 9,083

The accompanying notes are an integral part of these financial statements.

VERRICA PHARMACEUTICALS INC.
STATEMENTS OF OPERATIONS
(in thousands, except share and per share amounts)

	For the Years Ended December 31,	
	2016	2017
Operating expenses:		
Research and development	$ 1,709	$ 3,730
General and administrative	204	727
Total operating expenses	1,913	4,457
Loss from operations	(1,913)	(4,457)
Other expense:		
Interest expense—related party	—	(2)
Total other expense	—	(2)
Net loss	(1,913)	(4,459)
Deemed dividend on Series A preferred stock	—	(5,300)
Net loss attributable to common stockholders	$ (1,913)	$ (9,759)
Loss per share:		
Basic and diluted:		
Net loss	$ (0.30)	$ (0.70)
Deemed dividend on Series A preferred stock	—	(0.84)
Net loss attributable to common stockholders	$ (0.30)	$ (1.54)
Basic and diluted weighted average number of common shares outstanding	6,316,235	6,340,357
Pro forma basic and diluted (unaudited):		
Net loss	$ (0.07)	$ (0.15)
Deemed dividend on Series A preferred stock	—	(0.18)
Net loss attributable to common stockholders	$ (0.07)	$ (0.33)
Pro forma basic and diluted weighted average number of common shares outstanding (unaudited)	27,619,207	29,581,313

The accompanying notes are an integral part of these financial statements.

VERRICA PHARMACEUTICALS INC.
STATEMENTS OF CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT
(in thousands, except share amounts)

	Series A Convertible Preferred Stock		Series B Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Deficit	Treasury Stock at Cost	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount	Shares	Amount				
Balance as of December 31, 2015	21,302,972	2,306	$ —	—	6,340,998	$ 1	$ 2	$ (763)	$ —	$ (760)
Stock-based compensation	—	—	—	—	—	—	9	—	—	9
Series A convertible preferred stock receivable	—	500	—	—	—	—	—	—	—	—
Issuance costs for Series A preferred stock	—	(17)	—	—	—	—	—	—	—	—
Net loss	—	—	—	—	—	—	—	(1,913)	—	(1,913)
Balance as of December 31, 2016	21,302,972	2,789	—	—	6,340,998	1	11	(2,676)	—	(2,664)
Stock-based compensation	—	—	—	—	—	—	82	—	—	82
Series A convertible preferred stock receivable	—	8,000	—	—	—	—	—	—	—	—
Issuance costs for Series A preferred stock	—	(281)	—	—	—	—	—	—	—	—
Beneficial conversion feature for Series A preferred stock	—	(5,300)	—	—	—	—	5,300	—	—	5,300
Deemed dividend for Series A preferred stock	—	5,300	—	—	—	—	—	(5,300)	—	(5,300)
Series B convertible preferred stock	—	—	1,937,984	5,000	—	—	—	—	—	—
Net loss	—	—	—	—	—	—	—	(4,459)	—	(4,459)
Balance as of December 31, 2017	21,302,972	10,508	1,937,984	5,000	6,340,998	$ 1	$ 5,393	$ (12,435)	$ —	$ (7,041)

The accompanying notes are an integral part of these financial statements.

VERRICA PHARMACEUTICALS INC.
STATEMENTS OF CASH FLOWS
(in thousands)

	For the Years Ended December 31,	
	2016	2017
Cash flows from operating activities		
Net loss	$ (1,913)	$ (4,459)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock-based compensation	9	82
Changes in operating assets and liabilities:		
Prepaid expenses and other assets	(17)	(403)
Accounts payable	38	86
Accrued expenses	239	133
Accounts payable and accrued expenses—related party	33	(22)
Net cash used in operating activities	(1,611)	(4,583)
Cash flows from financing activities		
Proceeds received from Series A stock subscription receivable	500	8,000
Stock issuance costs related to Series A preferred stock	(17)	(281)
Proceeds received from issuance of Series B preferred stock	—	5,000
Net cash provided by financing activities	483	12,719
Net increase (decrease) in cash and cash equivalents	(1,128)	8,136
Cash and cash equivalents at the beginning of the period	1,655	527
Cash and cash equivalents at the end of the period	$ 527	$ 8,663
Supplemental disclosure of cash flow information:		
Cash paid for interest	$ —	$ 2

The accompanying notes are an integral part of these financial statements.

Note 1—Organization and Description of Business Operations

Verrica Pharmaceuticals Inc. (the "Company") was formed on July 3, 2013 and is incorporated in the State of Delaware. The Company is a clinical-stage medical dermatology company focused on identifying, developing and commercializing innovative pharmaceutical products for the treatment of skin diseases with significant unmet needs, with an initial focus on addressing molluscum contagiosum. The Company is controlled by PBM VP Holdings, LLC ("PBM VP Holdings"), an affiliate of PBM Capital Group, LLC.

Liquidity and Capital Resources

The Company has incurred substantial operating losses since inception, and expects to continue to incur significant operating losses for the foreseeable future and may never become profitable. As of December 31, 2017, the Company had an accumulated deficit of approximately $12.4 million.

On December 2, 2015, the Company entered into a Series A Preferred Stock Purchase Agreement (the "Agreement") with several investors and issued 21,302,972 shares of Series A convertible preferred stock (the "Series A Preferred Stock") for proceeds of $10.4 million. Per the Agreement, PBM VP Holdings was issued 19,252,983 shares of the Series A Preferred Stock, at an issuance price of $0.5194 per share, for cash consideration of $1.5 million upon closing and agreed to pay an additional $8.5 million as the Company requires additional funding pursuant to a budget approved by the Board of Directors. The Company received $0.5 million during the year ended December 31, 2016 and $8.0 million during the year ended December 31, 2017, respectively.

On December 15, 2017, the Company entered into a Series B Preferred Stock Purchase Agreement with one investor. The Company issued 1,937,984 shares of Series B convertible preferred stock (the "Series B Preferred Stock"), at an issuance price of $2.58 per share, for gross proceeds of $5.0 million.

On February 20, 2018 and March 7, 2018, the Company issued an aggregate of 4,606,267 shares of Series C convertible preferred stock (the "Series C Preferred Stock"), at an issuance price of $4.559 per share, for gross proceeds of approximately $21.0 million.

The Company expects to use the proceeds from the above transactions primarily for general corporate purposes, which may include financing the Company's growth, developing new or existing product candidates, and funding capital expenditures, acquisitions and investments. Management believes the Company currently has sufficient funds to meet its operating requirements for at least the next twelve months from the issuance of these financial statements.

Note 2—Significant Accounting Policies

Basis of Presentation and Principles of Consolidation

The Company's financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("GAAP") as determined by Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC").

Unaudited Pro Forma Information

The unaudited pro forma balance sheet data as of December 31, 2017 gives effect to the automatic conversion of all outstanding shares of the Company's Series A and B Preferred Stock on a one-for-one basis into an aggregate of 23,240,956 shares of common stock, which will occur immediately prior to the Company's planned initial public offering. The unaudited pro forma basic and diluted net loss per share for years ended December 31, 2016 and 2017 gives effect to such automatic conversion as if each had occurred as of the beginning of the period.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of expenses during the reporting period. The most significant estimates in the Company's financial statements relate to the valuation of common stock and stock options and the valuation allowance of deferred tax assets resulting from net operating losses. These estimates and assumptions are based on current facts, historical experience and various other factors believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities and the recording of expenses that are not readily apparent from other sources. Actual results may differ materially and adversely from these estimates. To the extent there are material differences between the estimates and actual results, the Company's future results of operations will be affected.

Cash and Cash Equivalents

The Company considers all highly liquid investments purchased with original maturities of 90 days or less at acquisition to be cash equivalents. As of December 31, 2016 and 2017, the Company does not have any cash equivalents.

Concentrations of Credit Risk and Off-Balance Sheet Risk

Cash and cash equivalents are financial instruments that are potentially subject to concentrations of credit risk. The Company's cash and cash equivalents are deposited in accounts at large financial institutions, and amounts may exceed federally insured limits. The Company believes it is not exposed to significant credit risk due to the financial strength of the depository institutions in which the cash and cash equivalents are held. The Company has no financial instruments with off-balance sheet risk of loss.

Research and Development Costs

The Company's research and development expenses consist primarily of costs associated with the Company's clinical trials, salaries, payroll taxes, employee benefits, and equity-based compensation charges for those individuals involved in ongoing research and development efforts. Research and development costs are expensed as incurred. Advance payments for goods and services that will be used in future research and development activities are expensed when the activity has been performed or when the goods have been received rather than when the payment is made.

Derivatives

The Company does not use derivative instruments to hedge exposures to cash flow, market, or foreign currency risks. The Company evaluates all of its financial instruments, including equity-linked financial instruments, to determine if such instruments are derivatives or contain features that qualify as embedded derivatives.

Fair Value Measurement

ASC 820, *Fair Value Measurements*, provides guidance on the development and disclosure of fair value measurements. Under this accounting guidance, fair value is defined as an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or a liability.

The accounting guidance classifies fair value measurements in one of the following three categories for disclosure purposes:

Level 1:	Quoted prices in active markets for identical assets or liabilities.
Level 2:	Inputs other than Level 1 prices for similar assets or liabilities that are directly or indirectly observable in the marketplace.
Level 3:	Unobservable inputs which are supported by little or no market activity and values determined using pricing models, discounted cash flow methodologies, or similar techniques, as well as instruments for which the determination of fair value requires significant judgment or estimation.

The carrying amount of the Company's financial instruments, including cash and cash equivalents, approximate their fair values.

Stock-Based Compensation

The Company expenses stock-based compensation to employees and board members over the requisite service period based on the estimated grant-date fair value of the awards. The Company accounts for forfeitures as they occur. Stock-based awards with graded-vesting schedules are recognized on a straight-line basis over the requisite service period for each separately vesting portion of the award. The Company estimates the fair value of stock option grants using the Black-Scholes option pricing model, and the assumptions used in calculating the fair value of stock-based awards represent management's best estimates and involve inherent uncertainties and the application of management's judgment. All stock-based compensation costs are recorded in general and administrative or research and development costs in the statements of operations based upon the underlying individual's role at the Company.

Stock-based compensation for non-employee stock options is recorded over the vesting period and remeasured at fair value until they vest.

Income Taxes

Income taxes are recorded in accordance with ASC 740, *Income Taxes* ("ASC 740"), which provides for deferred taxes using an asset and liability approach. The Company recognizes deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements or tax returns. Deferred tax assets and liabilities are determined based on the difference between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. Valuation allowances are provided, if based upon the weight of available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized.

The Company accounts for uncertain tax positions in accordance with the provisions of ASC 740. When uncertain tax positions exist, the Company recognizes the tax benefit of tax positions to the extent that the benefit would more likely than not be realized assuming examination by the taxing authority. The determination as to whether the tax benefit will more likely than not be realized is based upon the technical merits of the tax position as well as consideration of the available facts and circumstances. The Company recognizes any interest and penalties accrued related to unrecognized tax benefits as income tax expense.

Loss Per Share

Basic loss per share of common stock is computed by dividing net loss attributable to common stockholders by the weighted average number of shares of common stock outstanding for the period. Diluted loss per share excludes the potential impact of Series A and Series B Preferred Stock, common stock options and unvested shares of restricted stock because their effect would be anti-dilutive due to our net loss. Since the Company had a net loss in each of the periods presented, basic and diluted net loss per common share are the same.

The table below provides total potential shares outstanding, including those that are anti-dilutive:

	December 31,	
	2016	2017
Shares issuable upon conversion of Series A Preferred Stock	21,302,972	21,302,972
Shares issuable upon conversion of Series B Preferred Stock	—	1,937,984
Shares issuable upon exercise of stock options	125,000	155,000
Non-vested shares under restricted stock grants	3,706	—

Recently Adopted Accounting Pronouncements

In August 2014, the FASB issued Accounting Standards Update ("ASU") No. 2014-15, *Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern* ("ASU No. 2014-15") that requires management to evaluate whether there are conditions and events that raise substantial doubt about the Company's ability to continue as a going concern within one year after the financial statements are issued on both an interim and annual basis. Management is required to provide certain footnote disclosures if it concludes that substantial doubt exists or when its plans alleviate substantial doubt about the Company's ability to continue as a going concern. The Company adopted ASU No. 2014-15 on January 1, 2017 and its adoption did not have a material impact on the Company's financial statements and related disclosures.

In April 2016, the FASB issued ASU No. 2016-09, *Share-Based Payment: Simplifying the Accounting for Share-Based Payments*. The standard addresses several aspects of the accounting for employee share-based payment transactions, including the accounting for income taxes, forfeitures and statutory tax withholding requirements, as well as classification in the statement of cash flows. The Company adopted ASU 2016-09 during the first quarter of 2017 and elected to account for forfeitures as they occur. Other provisions of ASU 2016-09 had no impact on the Company's financial statements and related disclosures.

Recent Accounting Pronouncements

In May 2017, the FASB issued ASU 2017-09, *Compensation—Stock Compensation (Topic 718): Scope of Modification Accounting*, which clarifies when to account for a change to the terms or conditions of a share-based payment award as a modification. Under the new guidance, modification accounting is required only if the fair value, the vesting conditions, or the classification of the award (as equity or liability) changes as a result of the change in terms or conditions. The new standard will be effective on January 1, 2018; however, early adoption is permitted. The Company will adopt this guidance effective January 1, 2018 and the adoption of the guidance is not anticipated to have a material impact on the Company's financial statements and related disclosures.

Note 3—Related Party Transactions

On December 2, 2015, the Company entered into a Services Agreement (a "SA") with PBM Capital Group, LLC. Pursuant to the terms of the SA, which had an initial term of twelve months (and is automatically renewable for successive monthly periods), PBM Capital Group, LLC renders advisory and consulting services to the Company. Services provided under the SA may include certain business development, operations, technical, contract, accounting and back office support services. In consideration for these services, the Company is obligated to pay PBM Capital Group, LLC a monthly management fee of $2,500 (See Note 8).

For the years ended December 31, 2016 and 2017, the Company incurred expenses under the SA of $30,000 and $30,000, respectively, which were included in general and administrative expenses.

As of December 31, 2016 and December 31, 2017, the Company owed PBM Capital Group, LLC and its affiliates approximately $36,000 and $14,000, respectively.

The Company has transactions and short-term borrowings with PBM Capital Group, LLC and its affiliates. These transactions and balances can be non-interest bearing or bear nominal interest rates, and are due on demand. At December 31, 2016 and 2017, the amounts the Company owed these related parties were subject to a 3% per annum interest rate, which is included in accounts payable and accrued expenses-related party. In 2016 and 2017, interest expense related to amounts due to a related party was $171 and $2,087, respectively.

Note 4—Commitments and Contingencies

Office Lease

The Company is not a party to any leases for office space or equipment as of December 31, 2016 and 2017.

Litigation

As of December 31, 2016 and 2017, there was no litigation against the Company.

Note 5—Stockholders' Equity

Common Stock

The Company has authorized 29,100,000 and 33,236,900 shares of common stock, $0.0001 par value per share, as of December 31, 2016 and 2017, respectively. Each share of common stock is entitled to one voting right. Common stock owners are entitled to dividends when funds are legally available and declared by the Board of Directors.

Restricted Stock

Pursuant to an Amended and Restated Stock Purchase Agreement (the "Amended and Restated Agreement") between the Company and its founder, 1,454,946 shares held by the founder are subject to repurchase at $0.0001 per share. These shares will be released from the repurchase option, if the founder continues to provide services to the Company, and on the earliest to occur of (i) a change in control, (ii) regulatory approval of the Company's new drug application for cantharidin, (iii) commercial sale of products and (iv) a covered termination, as defined in the Amended and Restated Agreement.

Series A Preferred Stock

On December 2, 2015, the Company issued an aggregate of 21,302,972 shares of Series A Preferred Stock to fourteen investors for cash consideration of approximately $1.9 million, conversion of previously outstanding notes payable and accrued interest of approximately $0.5 million and a stock subscription receivable of $8.5 million. The Company incurred aggregate issuance costs of approximately $0.4 million, related to the issuance of the Series A Preferred Stock and subsequent settlement of the stock subscription receivable. PBM VP Holdings paid the Company $0.5 million during the year ended December 31, 2016 and $8.0 million during the year ended December 31, 2017.

The shares of Series A Preferred Stock are convertible, at the option of the holder, into shares of the Company's common stock based on a conversion calculation determined by dividing the original issue price of $0.5194 by the applicable conversion price. The conversion price for the Series A Preferred Stock is $0.5194. In the event of the Company issuing additional shares of common stock for no consideration or for a consideration per share less than the applicable conversion price, the conversion price shall be reduced, as defined in the certificate of incorporation. Each share of Series A Preferred Stock would be automatically converted into shares of common stock upon an initial public offering where the per share price is at least 200% of the Series B original issuance price and the resulting aggregate gross proceeds to the Company are at least $60.0 million.

The Series A Preferred Stock holders are entitled to receive dividends along with holders of the common stock on an as-if converted basis, if and when declared by the Company's Board of Directors. The holders of Series A Preferred Stock shall vote together with the holders of common stock on all matters on an as if converted basis, subject to certain conversion and ownership limitations, and shall not vote as a separate class. At any time when shares of Series A Preferred Stock (subject to adjustments) are outstanding, the Series A holders hold certain protective rights.

As long as at least 20% of the originally issued shares of Series A Preferred Stock remain outstanding (subject to adjustments from time to time) the holders of outstanding shares of Series A Preferred Stock, voting together as a single class, shall be entitled to elect three of the five individuals to the Company's Board of Directors.

Upon the liquidation, dissolution or winding-up of the Company, whether voluntary or involuntary, and upon certain deemed liquidation events, including a change of control, the holders of shares of Series A Preferred Stock shall be entitled to be paid out of the assets of the Company available for distribution to its stockholders, after payment of the Series B liquidation preference amount to the holders of Series B Preferred Stock but before common stockholders, an amount equal to $0.5194 per share, subject to adjustment, plus any dividends declared but unpaid. In the event that the Company's assets are insufficient to pay the Series A Preferred Stock holders the full liquidation preference amount, holders shall receive a ratable distribution in proportion to the full amount owed.

The Company classifies its Series A Preferred Stock outside of stockholders' deficit because redemption of the Series A Preferred Stock, upon a deemed liquidation event, is not solely within the Company's control. The Company does not accrete the carrying value of the preferred stock to the redemption values since a liquidation event is not considered probable as of December 31, 2016 and 2017.

Of the $8.0 million of the subscription receivable received by the Company during the year ended December 31, 2017, $5.3 million was received in the fourth quarter of 2017. As PBM VP Holdings was not obligated to fund the subscription receivable, the commitment date for Series A Preferred Stock issued is the date of each cash collection. Based on the valuation of the Company, as of the commitment date, a beneficial conversion feature was determined to exist. The resulting discount, which was limited to the cash proceeds received for the Series A Preferred Stock, totaled $5.3 million and was immediately recognized as a deemed dividend as the Series A Preferred Stock is immediately convertible. The deemed dividend is presented in the Statement of Operations, increasing net loss to arrive at net loss attributable to common stockholders.

Series B Preferred Stock

On December 15, 2017, the Company issued and sold an aggregate of 1,937,984 shares of Series B Preferred Stock, at an issuance price of $2.58 per share, for gross proceeds of $5.0 million. The Company did not incur any issuance costs for the Series B Preferred Stock.

The shares of Series B Preferred Stock are convertible, at the option of the holder, into shares of the Company's common stock based on a conversion calculation determined by dividing the original issue price of $2.58 by the applicable conversion price. The conversion price for the Series B Preferred Stock is $2.58. In the event of the Company issuing additional shares of common stock for no consideration or for a consideration per share less than the applicable conversion price, the conversion price shall be reduced, as defined. Each share of Series B Preferred Stock would be automatically converted into shares of common stock upon an initial public offering where the per share price is at least 200% of the Series B original issuance price and the resulting aggregate gross proceeds to the Company are at least $60.0 million.

The Series B Preferred Stock holders are entitled to receive annual non-compounding cash dividends at a rate of 8% if and when declared by the Company's Board of Directors. The dividend is non-cumulative. The

holders of Series B Preferred Stock shall vote together with the holders of common stock on all matters on an as if converted basis, subject to certain conversion and ownership limitations, and shall not vote as a separate class. At any time when at least 968,992 shares of Series B Preferred Stock (subject to adjustments) are outstanding, the Series B holders hold certain protective rights.

Upon the liquidation, dissolution or winding-up of the Company, whether voluntary or involuntary, and upon certain deemed liquidation events, including a change in control, the holders of shares of Series B Preferred Stock shall be entitled to be paid out of the assets of the Company available for distribution to its stockholders, before any payments to the holders of Series A Preferred Stock and common stockholders an amount equal to $2.58 per share, subject to adjustment plus any dividends declared but unpaid. In the event that the Company's assets are insufficient to pay the Series B Preferred Stock holders the full liquidation preference amount, all holders shall receive a ratable distribution in proportion to the full amount owed.

The Company classifies its Series B Preferred Stock outside of stockholders' deficit because redemption of the Series B Preferred Stock, upon a deemed liquidation event, is not solely within the Company's control.

Additional Liquidation Rights for Series A and Series B Preferred Stock

Upon the liquidation, dissolution or winding-up of the Company, whether voluntary or involuntary, and upon certain deemed liquidation events, including a change in control (collectively, the "Event"), after the payment of all preferential amounts required to be paid to the holders of Preferred Stock, the remaining assets of the Company available for distribution shall be distributed among the holders of shares of Series B and Series A Preferred Stock and common stockholders, on a pro rata basis, provided that A) if the aggregate amount which the holders of shares of Series B Preferred Stock are entitled to receive exceeds seven times the Series B original issue price, as adjusted, ("Series B Participation Amount") the holders of shares of Series B Preferred Stock shall be entitled to receive the greater of (i) the Series B Participation Amount and (ii) the amount such holder would have received if all the shares of Series B Preferred Stock had been converted into Common Stock immediately prior to such Event, and B) if the aggregate amount which the holders of Series A Preferred Stock are entitled to receive shall exceed seven times the Series A original issue price, as adjusted, ("Series A Participation Amount") each holder of Series A Preferred Stock shall be entitled to receive the greater of (i) the Series A Participation Amount and (ii) the amount such holder would have received if all the shares of Series A Preferred Stock had been converted into Common Stock immediately prior to such Event.

Note 6—Stock-Based Compensation

The Company's 2013 Equity Incentive Plan (the "Plan") permits the granting of incentive stock options, non-statutory stock options, stock appreciation rights, restricted stock and restricted stock units. The maximum aggregate shares of common stock that may be subject to awards and issued under the Plan was originally 1,000,000. On December 2, 2015, the Plan was amended to increase the maximum aggregate shares of common stock that may be subject to awards and issued under the Plan to 1,869,562. On February 20, 2018, the maximum aggregate shares of common stock that may be subject to awards and issued under the Plan was increased to 2,639,562. At December 31, 2017, 569,616 shares have been awarded and 1,299,946 shares remain available for issuance under the Plan.

Stock Options

The Company's employee stock options generally vest as follows: 25% after 12 months of continuous services and the remaining 75% on a ratable basis over a 36-month period from 12 months after the grant date. Stock options granted during the year ended December 31, 2017 have a maximum contractual term of 10 years. The stock options are subject to time vesting requirements through 2021, are nontransferable, and have term expiration dates set to expire in January 2027.

In April 2016, the Company granted 125,000 common stock options to non-employees, subject to the terms and conditions of the Plan above. The stock options are nontransferable and have term expiration dates set to expire in April 2026. 100,000 of the common stock options are subject to time vesting requirements through 2020. The remaining 25,000 common stock options were fully vested at grant.

In January 2017, the Company granted 30,000 common stock options to an employee, subject to the terms and conditions of the Plan above. The stock options are subject to time vesting requirements through 2021, are nontransferable, and have term expiration dates set to expire in January 2027. At December 31, 2017, none of these options had vested.

On December 22, 2017, the Company's Board of Directors granted a stock option award for 1,241,476 shares of common stock to the Company's Chief Executive Officer ("CEO Stock Option Grant") subject to the Board of Directors approval of a valuation report as to the value of the Company common stock. On February 12, 2018, the Board determined that the exercise price of the CEO Stock Option Grant would be equal to the greater of 1) $2.19 per share or 2) the Board of Directors approval of a valuation report as to the value of the Company common stock as of February 12, 2018. Since the Board of Directors did not approve the valuation report until March 28, 2018, the Company believes a mutual understanding did not occur and did not record stock-based compensation expense for the year ended December 31, 2017.

Option Awards

The fair value of each employee and non-employee stock option grant is estimated on the date of grant using the Black-Scholes option-pricing model. The Company is a private company and lacks company-specific historical and implied volatility information. Therefore, it estimates its expected stock volatility based on the historical volatility of a publicly traded set of peer companies. Due to the lack of historical exercise history, the expected term of the Company's stock options for employees has been determined utilizing the "simplified" method for awards. The expected term of stock options granted to non-employees is equal to the contractual term of the option award. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve in effect at the time of grant of the award for time periods approximately equal to the expected term of the award. Expected dividend yield is zero based on the fact that the Company has never paid cash dividends and does not expect to pay any cash dividends in the foreseeable future.

The fair value of the Company's common stock was estimated to be $0.15 and $2.19 at December 31, 2016 and 2017, respectively. In order to determine the fair value, the Company considered, among other things, contemporaneous valuations of the Company's common stock, the Company's business, financial condition and results of operations, including related industry trends affecting its operations; the likelihood of achieving a liquidity event, such as an initial public offering, or IPO, or sale, given prevailing market conditions; the lack of marketability of the Company's common stock; the market performance of comparable publicly traded companies; and U.S. and global economic and capital market conditions.

The Black-Scholes option-pricing model for the employee stock option granted in January 2017 utilized the December 31, 2016 valuation of our common stock. The Black-Scholes option-pricing model for non-employee stock options utilized the December 31, 2016 valuation of our common stock until the fourth quarter of 2017. During the fourth quarter of 2017, the Company raised $5.0 million from selling the Series B Preferred Stock, received positive clinical trial results upon completing its Phase 2 clinical trials for its primary compound in development and hired a new Chief Executive Officer which led to the increase in value of the Company's common stock at December 31, 2017.

The grant date fair value of employee stock option awards is determined using the Black-Scholes option-pricing model. The following assumptions were used during the year ended December 31, 2017.

	For the Year Ended December 31, 2017
Exercise price	$0.52
Risk-free rate of interest	1.92% - 2.23%
Expected term (years)	6.25
Expected stock price volatility	79.02% - 79.12%
Dividend yield	—

Non-employee options are remeasured to fair value each period through operations using a Black-Scholes option-pricing model until the options vest. There were no stock options granted to non-employees during the year ended December 31, 2017. Key assumptions used to estimate the fair value of the non-employee stock options measured during the year ended December 31, 2016 included risk-free interest rates of 1.49% to 2.45%, an expected volatility of 74.94% to 79.17%, no expected dividend yield and an expected term equal to the remaining contractual option term. Key assumptions used to estimate the fair value of the non-employee stock options measured during the year ended December 31, 2017 included risk-free interest rates of 1.79% to 2.48%, an expected volatility of 77.59% to 79.12%, no expected dividend yield and an expected term equal to the remaining contractual option term.

The following table summarizes the Company's stock option activity under the Plan for the years ended December 31, 2016 and 2017:

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (in years)	Aggregate Intrinsic Value
Outstanding as of December 31, 2016	125,000	$ 0.52	9.3	
Employee options granted	30,000	0.52	9.0	
Outstanding as of December 31, 2017	155,000	$ 0.52	8.4	$ 258,850
Options vested and exercisable as of December 31, 2017	70,830	$ 0.52	8.3	$ 118,286

The aggregate intrinsic value in the above table is calculated as the difference between fair value of the Company's common stock price and the exercise price of the stock options. The grant date fair value per share for the employee stock option grant during the year ended December 31, 2017 was $0.07. At December 31, 2017, the total unrecognized compensation related to unvested employee and non-employee stock option awards granted was $37,984, which the Company expects to recognize over a weighted-average period of approximately 1.1 years.

Restricted Stock

The Company's restricted stock awards generally vest on a ratable basis over a 24-month period from 12 months after the grant date.

A summary of the restricted stock award activity for the years ended December 31, 2016 and 2017 were as follows:

	Number of Units	Weighted Average Grant Date Fair Value
Nonvested at December 31, 2015	72,830	$ 0.15
Vested	(69,124)	$ 0.15
Nonvested at December 31, 2016	3,706	$ 0.15
Vested	(3,706)	$ 0.15
Nonvested at December 31, 2017	—	$ —

Stock-based compensation expense has been reported in the Company's statements of operations for the years ended December 31, 2016 and 2017 as follows:

	For the Years Ended December 31,	
	2016	2017
	(in thousands)	
General and administrative	$ 2	$ —
Research and development	7	82
Total stock-based compensation	$ 9	$ 82

Note 7—Income Taxes

A reconciliation of the statutory U.S. federal rate to the Company's effective tax rate consist of the following:

	For the Years Ended December 31,	
	2016	2017
	(in thousands)	
Tax computed at statutory federal income tax rate	$ (669)	$ (1,560)
State taxes, net of federal benefit	(109)	(255)
Federal tax change	—	898
Change in valuation allowance	778	917
Income tax provision (benefit)	$ —	$ —

The tax effects of the temporary differences and carry forwards that give rise to deferred tax assets consist of the following:

	December 31,	
	2016	2017
	(in thousands)	
Deferred tax assets:		
Net operating loss carryovers	$ 1,052	$ 1,946
Other	4	27
Total deferred tax assets	1,056	1,973
Less valuation allowance	(1,056)	(1,973)
Deferred tax asset, net of valuation allowance	$ —	$ —

On December 22, 2017, "H.R.1", formerly known as the "Tax Cuts and Jobs Act", was signed into law. Among other items, H.R.1 reduces the federal corporate tax rate to 21% from the existing maximum rate of 35%, effective January 1, 2018. As a result, the Company has concluded that this will cause the Company's net deferred tax asset to be revalued at the new lower tax rate. The Company has reduced the value of the deferred tax asset before valuation allowance by $0.9 million.

The Company has determined, based upon available evidence, that it is more likely than not that the net deferred tax asset will not be realized and, accordingly, has provided a full valuation allowance against its net deferred tax asset. Based on this analysis, the Company determined that a valuation allowance of $1.1 million was required as of December 31, 2016, resulting in $0 net deferred tax assets. The Company recorded a valuation allowance of $2.0 million and $0 net deferred tax assets as of December 31, 2017.

As of December 31, 2017, the Company had federal and state net operating loss carryforwards of approximately $7.0 million. The federal and state net operating loss carryforwards generated in the 2016 and 2017 tax years will begin to expire, if not utilized, by 2036. Utilization of the net operating loss carryforwards may be subject to an annual limitation according to Section 382 of the Internal Revenue Code of 1986 as amended, and similar provisions.

At December 31, 2017, the Company has uncertain tax positions related to federal and state income credits for its research and development activities. The total amount of unrecognized tax benefits was $0.1 million at December 31, 2016 and $0.1 million at December 31, 2017. The Company will recognize interest and penalties related to uncertain tax positions in income tax expense. As of December 31, 2017, the Company had no accrued interest or penalties related to uncertain tax positions and no amounts have been recognized in the Company's statement of operations. The Company does not anticipate a material change to unrecognized tax benefits in the next twelve months.

The 2014 and subsequent federal and state tax returns for the Company remain open for examination.

Note 8—Subsequent Events

Management has evaluated subsequent events through March 30, 2018, the date the financial statements were available for issuance.

On February 12, 2018, the Board approved stock option awards to employees for 585,000 options to acquire common stock. The exercise price of these awards will be measured as of February 12, 2018 for 265,000 options, February 26, 2018 for 195,000 options and March 5, 2018 for 125,000 options.

On February 20, 2018 and March 7, 2018, the Company issued and sold an aggregate of 4,606,267 Series C Preferred Shares, at an issuance price of $4.559 per share, for gross proceeds of approximately $21.0 million. Each share of Preferred Stock will be automatically converted into shares of common stock upon an initial public offering where the per share price is at least $5.16 resulting in aggregate gross proceeds to the Company of at least $60.0 million or upon a vote or written consent of the outstanding shares of each class of Preferred Stock.

On March 22, 2018, the Company executed a purchase order, denominated in Chinese yuan, with a supplier, pursuant to which the Company agreed to purchase approximately $2.3 million of crude cantharidin material.

On March 28, 2018, the Board approved the valuation of the Company's common stock of $3.80 per share as of February 12, 2018, which set the exercise price for 1,506,476 options (including 1,241,476 to the Company's Chief Executive Officer and 265,000 to other employees that were approved by the Board on December 22, 2017 and February 12, 2018, respectively) and established an accounting grant date. An accounting grant date for the remaining 320,000 options that were approved by the Board on February 12, 2018 will be established upon approval by the Board of a valuation report as of the applicable dates of grant.

On March 29, 2018, the Company amended the SA with PBM Capital Group, LLC, effective as of April 1, 2018. Pursuant to the terms of the SA, which has an initial term of twelve months (and is automatically renewable for successive monthly periods), PBM Capital Group, LLC will render advisory and consulting services to the Company. Services provided under the SA may include certain business development, operations, technical, contract, accounting and back office support services. In consideration for these services, the Company is obligated to pay PBM Capital Group, LLC a monthly management fee of $50,000. The SA as amended, provides for the termination by the Company with 30 days advance notice or a mutually agreed upon effective date for transition as individual services are cancelled with a corresponding reduction in the monthly management fee.

Through and including , 2018 (the 25th day after the date of this prospectus), all dealers effecting transactions in the Common Stock, whether or not participating in this offering, may be required to deliver a prospectus. This delivery requirement is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

Shares

Common Stock

PROSPECTUS

BofA Merrill Lynch

Jefferies

Cowen

, 2018

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

The following table indicates the expenses to be incurred in connection with the offering described in this registration statement, other than underwriting discounts and commissions, all of which will be paid by us. All amounts are estimated except the SEC registration fee, the Financial Industry Regulatory Authority, Inc., or FINRA, filing fee and The Nasdaq Global Market fee.

	Amount
SEC Registration fee	$ *
FINRA filing fee	*
Nasdaq Global Market initial listing fee	*
Accountants' fees and expenses	*
Legal fees and expenses	*
Blue Sky fees and expenses	*
Transfer Agent's fees and expenses	*
Printing and engraving expenses	*
Miscellaneous	*
Total expenses	$ *

* To be provided by amendment

Item 14. Indemnification of Directors and Officers.

We are incorporated under the laws of the State of Delaware. Section 102 of the Delaware General Corporation Law permits a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit.

Section 145 of the Delaware General Corporation Law provides that a corporation has the power to indemnify a director, officer, employee or agent of the corporation and certain other persons serving at the request of the corporation in related capacities against expenses (including attorneys' fees), judgments, fines and amounts paid in settlements actually and reasonably incurred by the person in connection with an action, suit or proceeding to which he is or is threatened to be made a party by reason of such position, if such person acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful, except that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

As permitted by the Delaware General Corporation Law, our amended and restated certificate of incorporation and bylaws to be in effect upon the closing of this offering will provide that: (i) we are required to indemnify our directors to the fullest extent permitted by the Delaware General Corporation Law; (ii) we may, in our discretion, indemnify our officers, employees and agents as set forth in the Delaware General Corporation Law; (iii) we are required, upon satisfaction of certain conditions, to advance all expenses incurred by our directors in connection with certain legal proceedings; (iv) the rights conferred in the bylaws are not exclusive; and (v) we are authorized to enter into indemnification agreements with our directors, officers, employees and agents.

In connection with this offering, we expect to enter into indemnification agreements with each of our directors and executive officers that require us to indemnify them against expenses, judgments, fines, settlements and other amounts that any such person becomes legally obligated to pay (including with respect to a derivative action) in connection with any proceeding, whether actual or threatened, to which such person may be made a party by reason of the fact that such person is or was a director or officer of us or any of our affiliates, provided such person acted in good faith and in a manner such person reasonably believed to be in, or not opposed to, our best interests. The indemnification agreements will also set forth certain procedures that will apply in the event of a claim for indemnification thereunder. We intend to enter into similar indemnification agreements with our executive officers prior to the completion of this offering. At present, no litigation or proceeding is pending that involves any of our directors or officers regarding which indemnification is sought, nor are we aware of any threatened litigation that may result in claims for indemnification.

We maintain a directors' and officers' liability insurance policy. The policy insures directors and officers against unindemnified losses arising from certain wrongful acts in their capacities as directors and officers and reimburses us for those losses for which we have lawfully indemnified the directors and officers. The policy contains various exclusions.

In addition, the underwriting agreement filed as Exhibit 1.1 to this Registration Statement provides for indemnification by the underwriters of us and our officers and directors for certain liabilities arising under the Securities Act, or otherwise. Our investor 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.

Issuances of Capital Stock

The following list sets forth information regarding all unregistered securities sold by us since January 1, 2015 through the date of the prospectus that forms a part of this registration statement.

- In December 2015, we issued an aggregate of 21,302,972 shares of our Series A convertible preferred stock to 14 investors at a purchase price of $0.5194 per share, for aggregate consideration of $10.9 million, including the conversion of the promissory notes with principal and accrued interest of $0.5 million.

- In December 2017, we issued an aggregate of 1,937,984 shares of our Series B convertible preferred stock to one investor at a purchase price of $2.58 per share, for aggregate consideration of $5.0 million.

- In February and March 2018, we issued an aggregate of 4,606,267 shares of our Series C convertible preferred stock to 11 investors at a purchase price of $4.559 per share, for aggregate consideration of $21.0 million.

The offers, sales and issuances of the securities described in the paragraphs above were exempt from registration under Section 4(a)(2) of the Securities Act and Regulation D promulgated under the Securities Act. Each of the purchasers represented to us that they acquired the securities for investment only and not with a view to or for sale in connection with any distribution thereof and appropriate legends were affixed to the securities issued in these transactions. The purchasers also represented to us that they were accredited investors as defined in Rule 501 promulgated under the Securities Act.

Equity Awards

From January 1, 2015 through the date of the prospectus that is a part of this registration statement, under the 2013 equity incentive plan, we have (1) issued and sold 17,766 shares of restricted common stock at a price per share of $0.01 and (2) granted options to purchase an aggregate of 1,981,476 shares of our common stock to employees, consultants and directors, having exercise prices ranging from $0.52 to $3.80 per share. We have not issued any shares of our common stock upon the exercise of stock options.

The offers, sales and issuances of the securities described in the foregoing paragraph were exempt from registration under Rule 701 promulgated under the Securities Act in that the transactions were under compensatory benefit plans and contracts relating to compensation as provided under Rule 701. The recipients of such securities were our employees, directors or consultants and received the securities under our 2013 equity incentive plan. Appropriate legends were affixed to the securities issued in these transactions setting forth that the securities had not been offered or sold pursuant to a registration statement and describing the applicable restrictions on transfer of the securities.

Item 16. Exhibits and Financial Statement Schedules.

The exhibits to the registration statement are listed below. Financial statement schedules have been omitted because the information required to be set forth therein is not applicable or is shown in the financial statements or notes thereto.

Exhibit Number	Description of Exhibit
1.1†	Form of Underwriting Agreement
3.1	Third Amended and Restated Certificate of Incorporation of the Registrant (currently in effect)
3.2	Bylaws of the Registrant (currently in effect)
3.3†	Form of Amended and Restated Certificate of Incorporation of the Registrant (to be effective upon the closing of this offering)
3.4†	Form of Amended and Restated Bylaws of the Registrant (to be effective upon the closing of this offering)
4.1†	Specimen Stock Certificate evidencing the shares of common stock
5.1†	Opinion of Cooley LLP
10.1	Amended and Restated Investors' Rights Agreement by and among the Registrant and certain of its stockholders, dated February 20, 2018
10.2+	2013 Equity Incentive Plan, as amended
10.3+	Form of Stock Option Grant Notice and Stock Option Agreement under 2013 Equity Incentive Plan
10.4†+	Form of 2018 Equity Incentive Plan
10.5†+	Form of Stock Option Grant Notice and Stock Option Agreement under 2018 Equity Incentive Plan
10.6†+	Form of Indemnification Agreement with Executive Officers and Directors
10.7+	Employment Agreement, by and between the Registrant and Ted White, dated as of December 11, 2017
10.8+	Employment Agreement, by and between the Registrant and Chris Degnan, dated as of February 7, 2018, as amended on February 14, 2018
10.9+	Employment Agreement, by and between the Registrant and Linda Palczuk, dated as of January 30, 2018, as amended on February 13, 2018
10.10+	Employment Agreement, by and between the Registrant and Joe Bonaccorso, dated as of January 6, 2018, as amended on January 29, 2018
10.11+	Employment Agreement, by and between the Registrant and Matt Davidson, dated as of December 2, 2015
10.12	Services Agreement, by and between the Registrant and PBM Capital Group, LLC, dated as of December 2, 2015, as amended on March 29, 2018
10.13+	Advisor Agreement, by and between the Registrant and Glenn Oclassen, dated as of August 7, 2014
10.14+	Amended and Restated Restricted Stock Purchase Agreement, by and between the Registrant and Matthew Davidson, dated as of December 2, 2015
10.15+	Restricted Stock Purchase Agreement, by and between the Registrant and Glenn Oclassen, dated as of August 7, 2014, as amended on January 31, 2018
23.1†	Consent of KPMG LLP, independent registered public accounting firm
23.2†	Consent of Cooley LLP (included in Exhibit 5.1)
24.1†	Power of Attorney (included on signature page)

\+ Indicates management contract or compensatory plan.
† To be submitted by amendment.

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 Securities 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 Securities 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, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the , on this day of , 2018.

VERRICA PHARMACEUTICALS INC.

By: _____
Ted White
Chief Executive Officer and President

KNOW ALL BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Ted White and Chris Degnan, and each of them, his true and lawful agent, proxy and attorney-in-fact, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to (i) act on, sign and file with the Securities and Exchange Commission any and all amendments (including post-effective amendments) to this registration statement together with all schedules and exhibits thereto and any subsequent registration statement filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, together with all schedules and exhibits thereto, (ii) act on, sign and file such certificates, instruments, agreements and other documents as may be necessary or appropriate in connection therewith, (iii) act on and file any supplement to any prospectus included in this registration statement or any such amendment or any subsequent registration statement filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and (iv) take any and all actions which may be necessary or appropriate to be done, as fully for all intents and purposes as he might or could do in person, hereby approving, ratifying and confirming all that such agent, proxy and attorney-in-fact or any of his substitutes may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement on Form S-1 has been signed by the following persons in the capacities held on the dates indicated.

Signature	Title	Date
_____		, 2018
Ted White	Chief Executive Officer (principal executive officer)	
_____		, 2018
Chris Degnan	Chief Financial Officer (principal financial and accounting officer)	
_____	Chairman of the Board of Directors	, 2018
Paul B. Manning		
_____	Director	, 2018
Sean Stalfort		
_____	Director	, 2018
Glenn Oclassen		
_____	Director	, 2018
Jayson Rieger		
_____	Director	, 2018
Matt Davidson		

EXHIBIT 3.1

THIRD AMENDED AND RESTATED CERTIFICATE OF INCORPORATION OF VERRICA PHARMACEUTICALS INC.

(Pursuant to Sections 242 and 245 of the General Corporation Law of the State of Delaware)

Verrica Pharmaceuticals Inc., a corporation organized and existing under and by virtue of the provisions of the General Corporation Law of the State of Delaware (the "**General Corporation Law**"),

DOES HEREBY CERTIFY:

1. That the name of this corporation is Verrica Pharmaceuticals Inc., and that this corporation was originally incorporated under the jurisdiction of the State of Delaware by the filing of the original Certificate of Incorporation with the Secretary of State of the State of Delaware on July 3, 2013. The corporation filed an Amended and Restated Certificate of Incorporation with the Secretary of State of the State of Delaware on December 2, 2015 and a Second Amended and Restated Certificate of Incorporation with the Secretary of State of the State of Delaware on December 14, 2017.

2. That the Board of Directors duly adopted resolutions proposing to amend and restate the Second Amended and Restated Certificate of Incorporation of this corporation, declaring said amendment and restatement to be advisable and in the best interests of this corporation and its stockholders, and authorizing the appropriate officers of this corporation to solicit the consent of the stockholders therefor, which resolution setting forth the proposed amendment and restatement is as follows:

RESOLVED, that the Second Amended and Restated Certificate of Incorporation of this corporation be amended and restated in its entirety to read as follows:

FIRST: The name of this corporation is Verrica Pharmaceuticals Inc. (the "**Corporation**").

SECOND: The address of the registered office of the Corporation in the State of Delaware is 251 Little Falls Drive, Wilmington, Delaware 19808, which is in the County of New Castle. The name of its registered agent at such address is Corporation Service Company.

THIRD: The nature of the business or purposes to be conducted or promoted is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law.

FOURTH: The total number of shares of all classes of stock which the Corporation shall have authority to issue is (i) Thirty-Six Million Four Hundred and Thirteen Thousand One Hundred and Seventy-Two (36,413,172) shares of Common Stock, $0.0001 par value per share ("**Common Stock**"), and (ii) Twenty-Seven Million Eight Hundred Forty-Seven Thousand Two Hundred and Twenty-Eight (27,847,228) shares of Preferred Stock, $0.0001 par value per share ("**Preferred Stock**"). Preferred Stock shall include Series A Preferred Stock, Series B Preferred Stock and Series C Preferred Stock.

The following is a statement of the designations and the powers, privileges and rights, and the qualifications, limitations or restrictions thereof in respect of each class of capital stock of the Corporation.

A. COMMON STOCK

1. General. The voting, dividend and liquidation rights of the holders of the Common Stock are subject to and qualified by the rights, powers and preferences of the holders of the Preferred Stock set forth herein.

2. Voting. The holders of the Common Stock are entitled to one vote for each share of Common Stock held at all meetings of stockholders (and written actions in lieu of meetings). There shall be no cumulative voting. The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by (in addition to any vote of the holders of one or more series of Preferred Stock that may be required by the terms of this Certificate of Incorporation) the affirmative vote of the holders of shares of capital stock of the Corporation representing a majority of the votes represented by all outstanding shares of capital stock of the Corporation entitled to vote, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law.

B. PREFERRED STOCK

Twenty-One Million Three Hundred and Two Thousand Nine Hundred Seventy-Two (21,302,972) shares of the authorized Preferred Stock of the Corporation are hereby designated "**Series A Preferred Stock**", One Million Nine Hundred and Thirty-Seven Thousand Nine Hundred and Eighty-Four (1,937,984) shares of the authorized Preferred Stock of the Corporation are hereby designated "**Series B Preferred Stock**" and Four Million Six Hundred Six Thousand Two Hundred and Seventy-Two (4,606,272) shares of the authorized Preferred Stock of the Corporation are hereby designated "**Series C Preferred Stock**", each with the following rights, preferences, powers, privileges and restrictions, qualifications and limitations. Unless otherwise indicated, references to "sections" or "subsections" in this Part B of this Article Fourth refer to sections and subsections of Part B of this Article Fourth.

1. Dividends.

1.1 Series B Dividend and Series C Dividend.

1.1.1 Holders of Series B Preferred Stock shall be entitled to receive, when, as and if declared by the Board of Directors (or any duly authorized committee of the Board of Directors) out of funds legally available for the payment of dividends under Delaware law, non-compounding cash dividends at a rate per annum equal to 8.00% of the Series B Original Issue Price (the "**Series B Dividend**"). The Series B Dividend shall be non-cumulative. If the Board of Directors or any duly authorized committee of the Board of Directors does not declare a dividend on the Series B Preferred Stock in respect of any given calendar year, the holders of Series B Preferred Stock shall have no right to receive any dividend for such

calendar year, and the Corporation shall have no obligation to pay a dividend for such calendar year, whether or not dividends are declared for any subsequent calendar year with respect to the Series B Preferred Stock. The **"Series B Original Issue Price"** shall mean $2.58 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series B Preferred Stock.

1.1.2 Holders of Series C Preferred Stock shall be entitled to receive, when, as and if declared by the Board of Directors (or any duly authorized committee of the Board of Directors) out of funds legally available for the payment of dividends under Delaware law, non-compounding cash dividends at a rate per annum equal to 8.00% of the Series C Original Issue Price (the "**Series C Dividend**"). The Series C Dividend shall be non-cumulative. If the Board of Directors or any duly authorized committee of the Board of Directors does not declare a dividend on the Series C Preferred Stock in respect of any given calendar year, the holders of Series C Preferred Stock shall have no right to receive any dividend for such calendar year, and the Corporation shall have no obligation to pay a dividend for such calendar year, whether or not dividends are declared for any subsequent calendar year with respect to the Series C Preferred Stock. The "**Series C Original Issue Price**" shall mean $4.559 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series C Preferred Stock.

1.1.3 The Corporation shall not declare, pay or set aside any dividends on shares of any class or series of capital stock of the Corporation (other than dividends on shares of Common Stock payable in shares of Common Stock) unless (in addition to the obtaining of any consents required elsewhere in the Certificate of Incorporation) the holders of the Series B Preferred Stock and Series C Preferred Stock then outstanding shall simultaneously receive a dividend on each outstanding share of Series B Preferred Stock and Series C Preferred Stock, respectively, in an amount at least equal to:

(a) With respect to each share of Series B Preferred Stock, the greater of (I) the Series B Dividend payable with respect to the calendar year in which such dividend is to be paid, and (II) (i) in the case of a dividend on Common Stock or any class or series that is convertible into Common Stock, that dividend per share of Series B Preferred Stock as would equal the product of (A) the dividend payable on each share of such class or series determined, if applicable, as if all shares of such class or series had been converted into Common Stock and (B) the number of shares of Common Stock issuable upon conversion of a share of Series B Preferred Stock, in each case calculated on the record date for determination of holders entitled to receive such dividend or (ii) in the case of a dividend on any class or series that is not convertible into Common Stock, at a rate per share of Series B Preferred Stock determined by (A) dividing the amount of the dividend payable on each share of such class or series of capital stock by the original issuance price of such class or series of capital stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to such class or series) and (B) multiplying such fraction by an amount equal to the Series B Original Issue Price; provided that, if the Corporation declares, pays or sets aside, on the same date, a dividend on shares of more than one class or series of capital stock of the Corporation, the dividend payable to the holders of Series B Preferred Stock pursuant to this Section 1.1 shall be calculated based upon the dividend on the class or series of capital stock that would result in the highest Series B Preferred Stock dividend; and

(b) With respect to each share of Series C Preferred Stock, the greater of (I) the Series C Dividend payable with respect to the calendar year in which such dividend is to be paid, and (II) (i) in the case of a dividend on Common Stock or any class or series that is convertible into Common Stock, that dividend per share of Series C Preferred Stock as would equal the product of (A) the dividend payable on each share of such class or series determined, if applicable, as if all shares of such class or series had been converted into Common Stock and (B) the number of shares of Common Stock issuable upon conversion of a share of Series C Preferred Stock, in each case calculated on the record date for determination of holders entitled to receive such dividend or (ii) in the case of a dividend on any class or series that is not convertible into Common Stock, at a rate per share of Series C Preferred Stock determined by (A) dividing the amount of the dividend payable on each share of such class or series of capital stock by the original issuance price of such class or series of capital stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to such class or series) and (B) multiplying such fraction by an amount equal to the Series C Original Issue Price; provided that, if the Corporation declares, pays or sets aside, on the same date, a dividend on shares of more than one class or series of capital stock of the Corporation, the dividend payable to the holders of Series C Preferred Stock pursuant to this Section 1.1 shall be calculated based upon the dividend on the class or series of capital stock that would result in the highest Series C Preferred Stock dividend.

1.2 Series A Dividend. The Corporation shall not declare, pay or set aside any dividends on shares of any other class or series of capital stock of the Corporation (other than Series B Dividends, Series C Dividends or dividends on shares of Common Stock payable in shares of Common Stock) unless (in addition to the obtaining of any consents required elsewhere in the Certificate of Incorporation) the holders of the Series A Preferred Stock then outstanding shall simultaneously receive a dividend on each outstanding share of Series A Preferred Stock in an amount at least equal to (i) in the case of a dividend on Common Stock or any class or series that is convertible into Common Stock, that dividend per share of Series A Preferred Stock as would equal the product of (A) the dividend payable on each share of such class or series determined, if applicable, as if all shares of such class or series had been converted into Common Stock and (B) the number of shares of Common Stock issuable upon conversion of a share of Series A Preferred Stock, in each case calculated on the record date for determination of holders entitled to receive such dividend or (ii) in the case of a dividend on any class or series that is not convertible into Common Stock, at a rate per share of Series A Preferred Stock determined by (A) dividing the amount of the dividend payable on each share of such class or series of capital stock by the original issuance price of such class or series of capital stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to such class or series) and (B) multiplying such fraction by an amount equal to the Series A Original Issue Price (as defined below); provided that, if the Corporation declares, pays or sets aside, on the same date, a dividend on shares of more than one class or series of capital stock of the Corporation, the dividend payable to the holders of Series A Preferred Stock pursuant to this Section 1.2 shall be calculated based upon the dividend on the class or series of capital stock that would result in the highest Series A Preferred Stock dividend. The **"Series A Original Issue Price"** shall mean $0.5194 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A Preferred Stock.

2. Liquidation, Dissolution or Winding Up; Certain Mergers, Consolidations and Asset Sales.

2.1 Preferential Payments to Holders of Series C Preferred Stock. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event (as defined below), the holders of shares of Series C Preferred Stock then outstanding shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders before any payment shall be made to the holders of Series B Preferred Stock, Series A Preferred Stock or Common Stock by reason of their ownership thereof, an amount per share equal to the Series C Original Issue Price (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar event with respect to such class of stock), plus any dividends declared but unpaid thereon (the amount payable pursuant to this sentence is hereinafter referred to as the "**Series C Liquidation Amount**"). If upon any such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Series C Preferred Stock the full amount to which they shall be entitled under this Section 2.1, the holders of shares of Series C Preferred Stock (alone) shall share ratably in any distribution of the assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.2 Preferential Payments to Holders of Series B Preferred Stock. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event (as defined below), the holders of shares of Series B Preferred Stock then outstanding shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders, after the payments to the holders of shares of Series C Preferred Stock pursuant to Section 2.1 and before any payment shall be made or any assets distributed pursuant to Section 2.3 and Section 2.4, an amount per share equal to the Series B Original Issue Price (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar event with respect to such class of stock), plus any dividends declared but unpaid thereon (the amount payable pursuant to this sentence is hereinafter referred to as the "**Series B Liquidation Amount**"). If upon any such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the assets of the Corporation available for distribution to its stockholders pursuant to this Section 2.2 shall be insufficient to pay the holders of shares of Series B Preferred Stock the full amount to which they shall be entitled under this Section 2.2, the holders of shares of Series B Preferred Stock (alone) shall share ratably in any distribution of the assets available for distribution pursuant to this Section 2.2 in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.3 Preferential Payments to Holders of Series A Preferred Stock. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event (as defined below), the holders of shares of Series A Preferred Stock then outstanding shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders, after the payments to the holders of shares of Series C Preferred Stock pursuant to Section 2.1 and the payments to the holders of shares of Series B Preferred Stock pursuant to Section 2.2 and before any payment shall be made or any assets distributed pursuant to Section 2.4, an amount per share equal to the Series A Original Issue Price (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar event with respect to such class of stock), plus any dividends declared but unpaid thereon (the amount payable pursuant to this sentence is hereinafter referred to as the "**Series A Liquidation Amount**"). If upon any such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the assets of the Corporation available for distribution to its stockholders pursuant to this Section 2.3 shall be insufficient to pay the holders of shares of Series A Preferred Stock the full amount to which they shall be entitled under this Section 2.3, the holders of shares of Series A Preferred Stock (alone) shall share ratably in any distribution of the assets available for distribution pursuant to this Section 2.3 in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.4 Remaining Assets. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, after the payment of all preferential amounts required to be paid to the holders of shares of Preferred Stock pursuant to Sections 2.1, 2.2 and 2.3, the remaining assets of the Corporation available for distribution to its stockholders shall be distributed among the holders of shares of Series C Preferred Stock, Series B Preferred Stock, Series A Preferred Stock and Common Stock, pro rata based on the number of shares of Common Stock (and Common Stock into which the shares of Series C Preferred Stock, Series B Preferred Stock and Series A Preferred Stock, respectively, are convertible at the time of distribution) held by each such holder; provided, however, that (I) if the aggregate amount which the holders of Series C Preferred Stock are entitled to receive under Sections 2.1 and 2.4 shall exceed seven times the Series C Original Issue Price, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar event (the "**Series C Maximum Participation Amount**"), each holder of Series C Preferred Stock shall be entitled to receive upon such liquidation, dissolution or winding up of the Corporation the greater of (i) the Series C Maximum Participation Amount and (ii) the amount such holder would have received if all shares of Series C Preferred Stock had been converted into Common Stock immediately prior to such liquidation, dissolution or winding up of the Corporation; (II) if the aggregate amount which the holders of Series B Preferred Stock are entitled to receive under Sections 2.2 and 2.4 shall exceed seven times the Series B Original Issue Price, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar event (the "**Series B Maximum Participation Amount**"), each holder of Series B Preferred Stock shall be entitled to receive upon such liquidation, dissolution or winding up of the Corporation the greater of (i) the Series B Maximum Participation Amount and (ii) the amount such holder would have received if all shares of Series B Preferred Stock had been converted into Common Stock immediately prior to such liquidation, dissolution or winding up of the Corporation; and (III) if the aggregate amount which the holders of Series A Preferred Stock are entitled to receive under Sections 2.3 and 2.4 shall exceed seven times the Series A Original Issue Price, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar event (the "**Series A Maximum Participation Amount**"), each holder of Series A Preferred Stock shall be entitled to receive upon such

liquidation, dissolution or winding up of the Corporation the greater of (i) the Series A Maximum Participation Amount and (ii) the amount such holder would have received if all shares of Series A Preferred Stock had been converted into Common Stock immediately prior to such liquidation, dissolution or winding up of the Corporation.

2.5 Deemed Liquidation Events.

2.5.1 Definition. Each of the following events shall be considered a "**Deemed Liquidation Event**" unless the holders of at least a majority of the outstanding shares of Series A Preferred Stock, the holders of at least a majority of the outstanding shares of Series B Preferred Stock and the holders of at least fifty-five percent (55%) of the outstanding shares of Series C Preferred Stock, each voting as a separate class, elect otherwise by written notice sent to the Corporation at least five (5) days prior to the effective date of any such event:

(a) a merger, consolidation, reorganization or recapitalization in which

(i) the Corporation is a constituent party or

(ii) a subsidiary of the Corporation is a constituent party and the Corporation issues shares of its capital stock pursuant to such merger, consolidation, reorganization or recapitalization,

except any such merger or consolidation involving the Corporation or a subsidiary in which the shares of capital stock of the Corporation outstanding immediately prior to such merger or consolidation continue to represent, or are converted into or exchanged for shares of capital stock that represent, immediately following such merger or consolidation, at least a majority, by voting power, of the capital stock of (I) the surviving or resulting corporation; or (2) if the surviving or resulting corporation is a wholly owned subsidiary of another corporation immediately following such merger or consolidation, the parent corporation of such surviving or resulting corporation; or

(b) the sale, lease, transfer, exclusive license or other disposition, in a single transaction or series of related transactions, by the Corporation or any subsidiary of the Corporation of all or substantially all the assets of the Corporation and its subsidiaries taken as a whole, or the sale or disposition (whether by merger, consolidation or otherwise) of one or more subsidiaries of the Corporation if substantially all of the assets of the Corporation and its subsidiaries taken as a whole are held by such subsidiary or subsidiaries, except where such sale, lease, transfer, exclusive license or other disposition is to a wholly owned subsidiary of the Corporation.

2.5.2 Effecting a Deemed Liquidation Event.

(a) The Corporation shall not have the power to effect a Deemed Liquidation Event referred to in Section 2.5.1(a)(i) unless the agreement or plan of merger or consolidation for such transaction (the "**Merger Agreement**") provides that the consideration payable to the stockholders of the Corporation shall be allocated among the holders of capital stock of the Corporation in accordance with Sections 2.1, 2.2, 2.3 and 2.4.

(b) In the event of a Deemed Liquidation Event referred to in Section 2.5.l(a)(ii) or 2.5.1(b), if the Corporation does not effect a dissolution of the Corporation under the General Corporation Law within ninety (90) days after such Deemed Liquidation Event, then (i) the Corporation shall send a written notice to each holder of Preferred Stock no later than the ninetieth (90th) day after the Deemed Liquidation Event advising such holders of their right (and the requirements to be met to secure such right) pursuant to the terms of the following clause to require the redemption of such shares of Preferred Stock, and (ii) if the holders of at least sixty percent (60%) of the then outstanding shares of each class of Preferred Stock so request in a written instrument delivered to the Corporation not later than one hundred twenty (120) days after such Deemed Liquidation Event, the Corporation shall use the consideration received by the Corporation for such Deemed Liquidation Event (net of any retained liabilities associated with the assets sold or technology licensed, as determined in good faith by the Board of Directors of the Corporation), together with any other assets of the Corporation available for distribution to its stockholders, all to the extent permitted by Delaware law governing distributions to stockholders (the "**Available Proceeds**"), on the one hundred fiftieth (150th) day after such Deemed Liquidation Event, to redeem all outstanding shares of Preferred Stock at a price per share equal to the amount that would be distributed to the holders of such Preferred Stock in accordance with Sections 2.1, 2.2, 2.3 and 2.4 as if the Available Proceeds were the only consideration payable in connection with such Deemed Liquidation Event. Notwithstanding the foregoing, in the event of a redemption pursuant to the preceding sentence, if the Available Proceeds are not sufficient to redeem all outstanding shares of a given class of Preferred Stock, the Corporation shall ratably redeem each holder's shares of such class of Preferred Stock to the fullest extent of such Available Proceeds, and shall redeem the remaining shares as soon as it may lawfully do so under Delaware law governing distributions to stockholders. Prior to the distribution or redemption provided for in this Section 2.5.2(b), the Corporation shall not expend or dissipate the consideration received for such Deemed Liquidation Event, except to discharge expenses incurred in connection with such Deemed Liquidation Event or in the ordinary course of business. On or before the applicable redemption date, each holder of shares of Preferred Stock to be redeemed shall, if a holder of shares in certificated form, surrender the certificate or certificates representing such shares (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation, in the manner and at the place designated by the Corporation, and thereupon the Available Proceeds allocable to such shares shall be payable to the order of the person whose name appears on such certificate or certificates as the owner thereof. If on the applicable redemption date the Available Proceeds payable upon redemption of the shares of Preferred Stock to be redeemed on such date is paid or tendered for payment or deposited with an independent payment agent so as to be available therefor in a timely manner, then notwithstanding that any certificates evidencing any of the shares of Preferred Stock so redeemed shall not have been surrendered, all rights with respect to such shares shall forthwith after the redemption date terminate, except only the right of the holders to receive their allocable share of the Available Proceeds without interest upon surrender of any such certificate or certificates therefor.

2.5.3 Amount Deemed Paid or Distributed. The amount deemed paid or distributed to the holders of capital stock of the Corporation upon any such merger, consolidation, sale, transfer, exclusive license, other disposition or redemption shall be the cash or the value of the property, rights or securities paid or distributed to such holders by the Corporation or the acquiring person, firm or other entity. The value of such property, rights or securities shall be determined in good faith by the Board of Directors of the Corporation.

2.5.4 Allocation of Escrow and Contingent Consideration. In the event of a Deemed Liquidation Event pursuant to Section 2.5.1(a)(i), if any portion of the consideration payable to the stockholders of the Corporation is payable only upon satisfaction of contingencies (the "**Additional Consideration**"), the Merger Agreement shall provide that (a) the portion of such consideration that is not Additional Consideration (such portion, the "**Initial Consideration**") shall be allocated among the holders of capital stock of the Corporation in accordance with Sections 2.1, 2.2, 2.3 and 2.4 as if the Initial Consideration were the only consideration payable in connection with such Deemed Liquidation Event; and (b) any Additional Consideration which becomes payable to the stockholders of the Corporation upon satisfaction of such contingencies shall be allocated among the holders of capital stock of the Corporation in accordance with Sections 2.1, 2.2, 2.3 and 2.4 after taking into account the previous payment of the Initial Consideration as part of the same transaction. For the purposes of this Section 2.5.4, consideration placed into escrow or retained as holdback to be available for satisfaction of indemnification or similar obligations in connection with such Deemed Liquidation Event shall be deemed to be Additional Consideration.

3. Voting.

3.1 General. On any matter presented to the stockholders of the Corporation for their action or consideration at any meeting of stockholders of the Corporation (or by written consent of stockholders in lieu of meeting), each holder of outstanding shares of Preferred Stock shall be entitled to cast the number of votes equal to the number of whole shares of Common Stock into which the shares of Preferred Stock held by such holder are convertible as of the record date for determining stockholders entitled to vote on such matter. Except as provided by law or by the other provisions of this Certificate of Incorporation, holders of Preferred Stock shall vote together with the holders of Common Stock as a single class.

3.2 Election of Directors. The authorized number of directors will be set forth in the Company's bylaws. As long as at least 20% of the originally issued shares of Series A Preferred issued from time to time pursuant to the Series A Purchase Agreement remain outstanding (subject to adjustment from time to time for any stock dividend, stock split, combination of shares, reorganization, recapitalization, reclassification or other similar event and otherwise as set forth herein), the holders of the outstanding shares of Series A Preferred Stock, voting together as a single class, shall be entitled to elect three (3) individuals to the Board of Directors (the "**Series A Directors**"). The holders of the outstanding shares of Common Stock, voting separately as a single class, shall be entitled to elect two directors (the "**Common Directors**"). All other directors of the Company shall be elected by the holders of Preferred Stock and Common Stock (voting together as a single class and not as separate series, and on an as-converted basis). Any director elected pursuant to this Section 3.2 may be removed with or without cause only by the affirmative vote or written consent of the holders of the shares of the

class, series or classes of stock entitled to elect such director or directors. There shall be no cumulative voting. Any vacancy, including newly created directorships resulting from any increase in the authorized number of directors and vacancies created by removal or resignation of a director, may be filled by a majority of the directors then in office, though less than a quorum, or by a sole remaining director, and any directors so chosen shall hold office until the next annual meeting of stockholders or until their successors are duly elected and qualified, unless they sooner resign or are removed; provided, however, that where a vacancy occurs among the directors elected by the holders of a class or classes or series of stock and a director is appointed to fill such vacancy by the directors then in office, the holders of shares of such class or series of stock entitled to elect such director may require the removal of any director appointed by the Board of Directors to fill such vacancy by voting for their own designee to fill such vacancy (i) at a meeting of the Company's stockholders duly convened in accordance with the provisions of the Company's bylaws or (ii) by written consent, in accordance with the terms of the Company's bylaws, if the consenting stockholders hold a sufficient number of shares to elect their designee at a meeting of stockholders. At any meeting held for the purpose of electing a director, the presence in person or by proxy of the holders of a majority of the outstanding shares of the class or series entitled to elect such director shall constitute a quorum for the purpose of electing such director. During any period where a Series A Director or Common Director seat remains vacant, the Board of Directors nonetheless shall be deemed duly constituted.

3.3 Series C Preferred Stock Protective Provisions. At any time when at least Two Million One Hundred Ninety-Three Thousand Four Hundred and Sixty-Three (2,193,463) shares of Series C Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series C Preferred Stock) are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or this Certificate of Incorporation) the written consent or affirmative vote of the holders of at least fifty-five percent (55%) of the then outstanding shares of Series C Preferred Stock, given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a class, and any such act or transaction entered into without such consent or vote shall be null and void *ab initio,* and of no force or effect:

3.3.1 amend, alter or repeal any provision of the Certificate of Incorporation or Bylaws of the Corporation in a manner that adversely affects the powers, preferences or rights of the Series C Preferred Stock;

3.3.2 create, or authorize the creation of, or issue or obligate itself to issue shares of, any additional class or series of capital stock unless the same ranks junior to the Series C Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends and rights of redemption, or increase the authorized number of shares of Series C Preferred Stock or increase the authorized number of shares of any additional class or series of capital stock unless the same ranks junior to the Series C Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends and rights of redemption;

3.3.3 (i) reclassify, alter or amend any existing security of the Corporation that is pari passu with the Series C Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to the Series C Preferred Stock in respect of any such right, preference, or privilege or (ii) reclassify, alter or amend any existing security of the Corporation that is junior to the Series C Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to or pari passu with the Series C Preferred Stock in respect of any such right, preference or privilege;

3.3.4 purchase or redeem (or permit any subsidiary to purchase or redeem) or pay or declare any dividend or make any distribution on, any shares of capital stock of the Corporation other than (i) redemptions of or dividends or distributions on the Series C Preferred Stock as expressly authorized herein, (ii) dividends or other distributions payable on the Common Stock solely in the form of additional shares of Common Stock and (iii) repurchases of stock from former employees, officers, directors, consultants or other persons who performed services for the Corporation or any subsidiary in connection with the cessation of such employment or service at the lower of the original purchase price or the then-current fair market value thereof; or

3.3.5 effect any liquidation, dissolution or winding up of the Corporation or declaration of bankruptcy.

3.4 Series B Preferred Stock Protective Provisions. At any time when at least Nine Hundred Sixty-Eight Thousand Nine Hundred Ninety-Two (968,992) shares of Series B Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series B Preferred Stock) are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or this Certificate of Incorporation) the written consent or affirmative vote of the holders of at least a majority of the then outstanding shares of Series B Preferred Stock, given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a class, and any such act or transaction entered into without such consent or vote shall be null and void *ab initio,* and of no force or effect:

3.4.1 amend, alter or repeal any provision of the Certificate of Incorporation or Bylaws of the Corporation in a manner that adversely affects the powers, preferences or rights of the Series B Preferred Stock;

3.4.2 create, or authorize the creation of, or issue or obligate itself to issue shares of, any additional class or series of capital stock unless the same ranks junior to the Series B Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends and rights of redemption, or increase the authorized number of shares of Series B Preferred Stock or increase the authorized number of shares of any additional class or series of capital stock unless the same ranks junior to the Series B Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends and rights of redemption;

3.4.3 (i) reclassify, alter or amend any existing security of the Corporation that is pari passu with the Series B Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to the Series B Preferred Stock in respect of any such right, preference, or privilege or (ii) reclassify, alter or amend any existing security of the Corporation that is junior to the Series B Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to or pari passu with the Series B Preferred Stock in respect of any such right, preference or privilege;

3.4.4 purchase or redeem (or permit any subsidiary to purchase or redeem) or pay or declare any dividend or make any distribution on, any shares of capital stock of the Corporation other than (i) redemptions of or dividends or distributions on the Series B Preferred Stock as expressly authorized herein, (ii) dividends or other distributions payable on the Common Stock solely in the form of additional shares of Common Stock and (iii) repurchases of stock from former employees, officers, directors, consultants or other persons who performed services for the Corporation or any subsidiary in connection with the cessation of such employment or service at the lower of the original purchase price or the then-current fair market value thereof; or

3.4.5 effect any liquidation, dissolution or winding up of the Corporation or declaration of bankruptcy.

3.5 Series A Preferred Stock Protective Provisions. At any time when any shares of Series A Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A Preferred Stock) are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or this Certificate of Incorporation) the written consent or affirmative vote of the holders of at least a majority of the then outstanding shares of Series A Preferred Stock, given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a class, and any such act or transaction entered into without such consent or vote shall be null and void ab initio, and of no force or effect:

3.5.1 amend, alter or repeal any provision of the Certificate of Incorporation or Bylaws of the Corporation in a manner that adversely affects the powers, preferences or rights of the Series A Preferred Stock;

3.5.2 create, or authorize the creation of, or issue or obligate itself to issue shares of, any additional class or series of capital stock unless the same ranks junior to the Series A Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends and rights of redemption, or increase the authorized number of shares of Series A Preferred Stock or increase the authorized number of shares of any additional class or series of capital stock unless the same ranks junior to the Series A Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends and rights of redemption;

3.5.3 (i) reclassify, alter or amend any existing security of the Corporation that is pari passu with the Series A Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to the Series A Preferred Stock in respect of any such right, preference, or privilege or (ii) reclassify, alter or amend any existing security of the Corporation that is junior to the Series A Preferred Stock in respect of the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends or rights of redemption, if such reclassification, alteration or amendment would render such other security senior to or pari passu with the Series A Preferred Stock in respect of any such right, preference or privilege;

3.5.4 purchase or redeem (or permit any subsidiary to purchase or redeem) or pay or declare any dividend or make any distribution on, any shares of capital stock of the Corporation other than (i) redemptions of or dividends or distributions on the Series A Preferred Stock as expressly authorized herein, (ii) dividends or other distributions payable on the Common Stock solely in the form of additional shares of Common Stock and (iii) repurchases of stock from former employees, officers, directors, consultants or other persons who performed services for the Corporation or any subsidiary in connection with the cessation of such employment or service at the lower of the original purchase price or the then-current fair market value thereof; or

3.5.5 effect any liquidation, dissolution or winding up of the Corporation or declaration of bankruptcy.

4. Optional Conversion. The holders of Preferred Stock shall have conversion rights as follows (the "**Conversion Rights**"):

4.1 Right to Convert.

4.1.1 Conversion Ratio.

(a) Each share of Series C Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and non-assessable shares of Common Stock as is determined by dividing the Series C Original Issue Price by the Series C Conversion Price (as defined below) in effect at the time of conversion. The "**Series C Conversion Price**" shall initially be equal to $4.559. Such initial Series C Conversion Price, and the rate at which shares of Series C Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below.

(b) Each share of Series B Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and non-assessable shares of Common Stock as is determined by dividing the Series B Original Issue Price by the Series B Conversion Price (as defined below) in effect at the time of conversion. The "**Series B Conversion Price**" shall initially be equal to $2.58. Such initial Series B Conversion Price, and the rate at which shares of Series B Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below.

(c) Each share of Series A Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and non-assessable shares of Common Stock as is determined by dividing the Series A Original Issue Price by the Series A Conversion Price (as defined below) in effect at the time of conversion. The "**Series A Conversion Price**" shall initially be equal to $0.5194. Such initial Series A Conversion Price, and the rate at which shares of Series A Preferred Stock may be converted into shares of Common Stock, shall be subject to adjustment as provided below. For purposes hereof, the Series C Conversion Price, the Series B Conversion Price and the Series A Conversion Price shall be referred to, collectively, as the "**Conversion Price**" and, individually, as the "**applicable Conversion Price**."

4.1.2 Termination of Conversion Rights. In the event of a liquidation, dissolution or winding up of the Corporation or a Deemed Liquidation Event, the Conversion Rights shall terminate at the close of business on the last full day preceding the date fixed for the payment of any such amounts distributable on such event to the holders of Preferred Stock.

4.2 Fractional Shares. No fractional shares of Common Stock shall be issued upon conversion of the Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the fair market value of a share of Common Stock as determined in good faith by the Board of Directors of the Corporation. Whether or not fractional shares would be issuable upon such conversion shall be determined on the basis of the total number of shares of Preferred Stock the holder is at the time converting into Common Stock and the aggregate number of shares of Common Stock issuable upon such conversion.

4.3 Mechanics of Conversion.

4.3.1 Notice of Conversion. In order for a holder of Preferred Stock to voluntarily convert shares of Preferred Stock into shares of Common Stock, such holder shall (a) provide written notice to the Corporation's transfer agent at the office of the transfer agent for the Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent) that such holder elects to convert all or any number of such holder's shares of Preferred Stock and, if applicable, any event on which such conversion is contingent and (b) if such holder's shares are certificated, surrender the certificate or certificates for such shares of Preferred Stock (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate), at the office of the transfer agent for the Preferred Stock (or at the principal office of the Corporation if the

Corporation serves as its own transfer agent). Such notice shall state such holder's name or the names of the nominees in which such holder wishes the shares of Common Stock to be issued. If required by the Corporation, any certificates surrendered for conversion shall be endorsed or accompanied by a written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or his, her or its attorney duly authorized in writing. The close of business on the date of receipt by the transfer agent (or by the Corporation if the Corporation serves as its own transfer agent) of such notice and, if applicable, certificates (or lost certificate affidavit and agreement) shall be the time of conversion (the "**Conversion Time**"), and the shares of Common Stock issuable upon conversion of the specified shares shall be deemed to be outstanding of record as of such date. The Corporation shall, as soon as practicable after the Conversion Time (i) issue and deliver to such holder of Preferred Stock, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable upon such conversion in accordance with the provisions hereof and a certificate for the number (if any) of the shares of Preferred Stock represented by the surrendered certificate that were not converted into Common Stock, (ii) pay in cash such amount as provided in Section 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion, and (iii) pay all declared but unpaid dividends on the shares of Preferred Stock converted.

4.3.2 Reservation of Shares. The Corporation shall at all times when the Preferred Stock shall be outstanding, reserve and keep available out of its authorized but unissued capital stock, for the purpose of effecting the conversion of the Preferred Stock, such number of its duly authorized shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding Preferred Stock; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of the Preferred Stock, the Corporation shall take such corporate action as may be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purposes, including, without limitation, engaging in best efforts to obtain the requisite stockholder approval of any necessary amendment to the Certificate of Incorporation. Before taking any action which would cause an adjustment reducing the applicable Conversion Price below the then par value of the shares of Common Stock issuable upon conversion of the applicable class of Preferred Stock, the Corporation will take any corporate action which may, in the opinion of its counsel, be necessary in order that the Corporation may validly and legally issue fully paid and non-assessable shares of Common Stock at such adjusted applicable Conversion Price.

4.3.3 Effect of Conversion. All shares of Preferred Stock which shall have been surrendered for conversion as herein provided shall no longer be deemed to be outstanding and all rights with respect to such shares shall immediately cease and terminate at the Conversion Time, except only the right of the holders thereof to receive shares of Common Stock in exchange therefor, to receive payment in lieu of any fraction of a share otherwise issuable upon such conversion as provided in Section 4.2 and to receive payment of any dividends declared but unpaid thereon. Any shares of Preferred Stock so converted shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Preferred Stock accordingly.

4.3.4 No Further Adjustment. Upon any such conversion, no adjustment to the applicable Conversion Price shall be made for any declared but unpaid dividends on the applicable class of Preferred Stock surrendered for conversion or on the Common Stock delivered upon conversion.

4.3.5 Taxes. The Corporation shall pay any and all issue and other similar taxes that may be payable in respect of any issuance or delivery of shares of Common Stock upon conversion of shares of Preferred Stock pursuant to this Section 4. The Corporation shall not, however, be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of shares of Common Stock in a name other than that in which the shares of Preferred Stock so converted were registered, and no such issuance or delivery shall be made unless and until the person or entity requesting such issuance has paid to the Corporation the amount of any such tax or has established, to the satisfaction of the Corporation, that such tax has been paid.

4.4 Adjustments to Conversion Price for Diluting Issues.

4.4.1 Special Definitions. For purposes of this Article Fourth, the following definitions shall apply:

(a) "**Option**" shall mean rights, options or warrants to subscribe for, purchase or otherwise acquire Common Stock or Convertible Securities.

(b) "**Original Issue Date**" shall mean the date on which the first share of Series C Preferred Stock was issued.

(c) "**Convertible Securities**" shall mean any evidences of indebtedness, shares or other securities directly or indirectly convertible into or exchangeable for Common Stock, but excluding Options.

(d) "**Additional Shares of Common Stock**" shall mean, with respect to a series of Preferred Stock, all shares of Common Stock issued (or, pursuant to Section 4.4.3 below, deemed to be issued) by the Corporation after the Original Issue Date, other than (1) the following shares of Common Stock and (2) shares of Common Stock deemed issued pursuant to the following Options and Convertible Securities (clauses (1) and (2), collectively, "**Exempted Securities**"):

(i) shares of Common Stock, Options or Convertible Securities issued as a dividend or distribution on the applicable series of Preferred Stock;

(ii) shares of Common Stock, Options or Convertible Securities issued by reason of a dividend, stock split, split-up or other distribution on shares of Common Stock that is covered by Section 4.5, 4.6, 4.7 or 4.8;

(iii) shares of Common Stock or Options issued to employees or directors of, or consultants or advisors to, the Corporation or any of its subsidiaries pursuant to an employee equity incentive plan, agreement or arrangement approved by the Board of Directors of the Corporation;

(iv) shares of Common Stock or Convertible Securities actually issued upon the exercise of Options or shares of Common Stock actually issued upon the conversion or exchange of Convertible Securities, in each case provided such issuance is pursuant to the terms of such Option or Convertible Security;

(v) shares of Common Stock, Options or Convertible Securities issued to banks, equipment lessors or other financial institutions, or to real property lessors, pursuant to a debt financing, equipment leasing or real property leasing transaction approved by the Board of Directors of the Corporation;

(vi) shares of Common Stock, Options or Convertible Securities issued to suppliers or third party service providers in connection with the provision of goods or services pursuant to transactions approved by the Board of Directors of the Corporation;

(vii) shares of Common Stock, Options or Convertible Securities issued pursuant to the acquisition of another corporation by the Corporation by merger, purchase of substantially all of the assets or other reorganization or to a joint venture agreement, provided that such issuances are approved by the Board of Directors of the Corporation; or

(viii) shares of Common Stock, Options or Convertible Securities issued in connection with sponsored research, collaboration, technology license, development, OEM, marketing or other similar agreements or strategic partnerships approved by the Board of Directors of the Corporation.

4.4.2 No Adjustment of Conversion Price. No adjustment in the applicable Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of at least fifty-five percent (55%) of the then outstanding shares of the applicable series of Preferred Stock to which such Conversion Price relates agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock.

4.4.3 Deemed Issue of Additional Shares of Common Stock.

(a) If the Corporation at any time or from time to time after the Original Issue Date shall issue any Options or Convertible Securities (excluding Options or Convertible Securities which are themselves Exempted Securities) or shall fix a record date for the determination of holders of any class of securities entitled to receive any such Options or Convertible Securities, then the maximum number of shares of Common Stock (as set forth in the instrument relating thereto, assuming the satisfaction of any conditions to

exercisability, convertibility or exchangeability but without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or, in the case of Convertible Securities and Options therefor, the conversion or exchange of such Convertible Securities, shall be deemed to be Additional Shares of Common Stock with respect to the applicable series of Preferred Stock issued as of the time of such issue or, in case such a record date shall have been fixed, as of the close of business on such record date.

(b) If the terms of any Option or Convertible Security, the issuance of which resulted in an adjustment to either Conversion Price pursuant to the terms of Section 4.4.4, are revised as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase or decrease in the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any such Option or Convertible Security or (2) any increase or decrease in the consideration payable to the Corporation upon such exercise, conversion and/or exchange, then, effective upon such increase or decrease becoming effective, the applicable Conversion Price computed upon the original issue of such Option or Convertible Security (or upon the occurrence of a record date with respect thereto) shall be readjusted to such applicable Conversion Price as would have obtained had such revised terms been in effect upon the original date of issuance of such Option or Convertible Security. Notwithstanding the foregoing, no readjustment pursuant to this clause (b) shall have the effect of increasing the applicable Conversion Price to an amount which exceeds the lower of (i) the applicable Conversion Price in effect immediately prior to the original adjustment made as a result of the issuance of such Option or Convertible Security, or (ii) the applicable Conversion Price that would have resulted from any issuances of Additional Shares of Common Stock (other than deemed issuances of Additional Shares of Common Stock as a result of the issuance of such Option or Convertible Security) between the original adjustment date and such readjustment date.

(c) If the terms of any Option or Convertible Security (excluding Options or Convertible Securities which are themselves Exempted Securities), the issuance of which did not result in an adjustment to the applicable Conversion Price pursuant to the terms of Section 4.4.4 (either because the consideration per share (determined pursuant to Section 4.4.5) of the Additional Shares of Common Stock subject thereto was equal to or greater than the applicable Conversion Price then in effect, or because such Option or Convertible Security was issued before the Original Issue Date), are revised after the Original Issue Date as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase in the number of shares of Common Stock issuable upon the exercise, conversion or exchange of any such Option or Convertible Security or (2) any decrease in the consideration payable to the Corporation upon such exercise, conversion or exchange, then such Option or Convertible Security, as so amended or adjusted, and the Additional Shares of Common Stock subject thereto (determined in the manner provided in Section 4.4.3(a) shall be deemed to have been issued effective upon such increase or decrease becoming effective.

(d) Upon the expiration or termination of any unexercised Option or unconverted or unexchanged Convertible Security (or portion thereof) which resulted (either upon its original issuance or upon a revision of its terms) in an adjustment to the applicable Conversion Price pursuant to the terms of Section 4.4.4, the applicable Conversion Price shall be readjusted to such applicable Conversion Price as would have obtained had such Option or Convertible Security (or portion thereof) never been issued.

(e) If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, is calculable at the time such Option or Convertible Security is issued or amended but is subject to adjustment based upon subsequent events, any adjustment to the applicable Conversion Price provided for in this Section 4.4.3 shall be effected at the time of such issuance or amendment based on such number of shares or amount of consideration without regard to any provisions for subsequent adjustments (and any subsequent adjustments shall be treated as provided in clauses (b) and (c) of this Section 4.4.3). If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, cannot be calculated at all at the time such Option or Convertible Security is issued or amended, any adjustment to the applicable Conversion Price that would result under the terms of this Section 4.4.3 at the time of such issuance or amendment shall instead be effected at the time such number of shares and/or amount of consideration is first calculable (even if subject to subsequent adjustments), assuming for purposes of calculating such adjustment to the applicable Conversion Price that such issuance or amendment took place at the time such calculation can first be made.

4.4.4 Adjustment of Conversion Price Upon Issuance of Additional Shares of Common Stock. In the event the Corporation shall at any time after the Original Issue Date issue Additional Shares of Common Stock (including Additional Shares of Common Stock deemed to be issued pursuant to Section 4.4.3), without consideration or for a consideration per share less than the applicable Conversion Price in effect immediately prior to such issue, then the applicable Conversion Price shall be reduced, concurrently with such issue, to a price (calculated to the nearest one-hundredth of a cent) determined in accordance with the following formula:

$$CP_2 = CP_1 * (A + B) \div (A + C).$$

For purposes of the foregoing formula, the following definitions shall apply:

(a) "CP_2" shall mean the applicable Conversion Price in effect immediately after such issue of Additional Shares of Common Stock

(b) "CP_1" shall mean the applicable Conversion Price in effect immediately prior to such issue of Additional Shares of Common Stock;

(c) "A" shall mean the number of shares of Common Stock outstanding immediately prior to such issue of Additional Shares of Common Stock outstanding immediately prior to such issue;

(d) "B" shall mean the number of shares of Common Stock that would have been issued if such Additional Shares of Common Stock had been issued at a price per share equal to CP_1 (determined by dividing the aggregate consideration received by the Corporation in respect of such issue by CP_1); and

(e) "C" shall mean the number of such Additional Shares of Common Stock issued in such transaction.

4.4.5 Determination of Consideration. For purposes of this Section 4.4, the consideration received by the Corporation for the issue of any Additional Shares of Common Stock shall be computed as follows:

(a) Cash and Property: Such consideration shall:

(i) insofar as it consists of cash, be computed at the aggregate amount of cash received by the Corporation, excluding amounts paid or payable for accrued interest;

(ii) insofar as it consists of property other than cash, be computed at the fair market value thereof at the time of such issue, as determined in good faith by the Board of Directors of the Corporation; and

(iii) in the event Additional Shares of Common Stock are issued together with other shares or securities or other assets of the Corporation for consideration which covers both, be the proportion of such consideration so received, computed as provided in clauses (i) and (ii) above, as determined in good faith by the Board of Directors of the Corporation.

(b) Options and Convertible Securities. The consideration per share received by the Corporation for Additional Shares of Common Stock deemed to have been issued pursuant to Section 4.4.3, relating to Options and Convertible Securities, shall be determined by dividing:

(i) The total amount, if any, received or receivable by the Corporation as consideration for the issue of such Options or Convertible Securities, plus the minimum aggregate amount of additional consideration (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such consideration) payable to the Corporation upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities, by

(ii) the maximum number of shares of Common Stock (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities.

4.4.6 Multiple Closing Dates. In the event the Corporation shall issue on more than one date Additional Shares of Common Stock that are a part of one transaction or a series of related transactions and that would result in an adjustment to the applicable Conversion Price pursuant to the terms of Section 4.4.4, then, upon the final such issuance, the applicable Conversion Price shall be readjusted to give effect to all such issuances as if they occurred on the date of the first such issuance (and without giving effect to any additional adjustments as a result of any such subsequent issuances within such period).

4.5 Adjustment for Stock Splits and Combinations. If the Corporation shall at any time or from time to time after the Original Issue Date effect a subdivision of the outstanding Common Stock, the applicable Conversion Price in effect immediately before that subdivision shall be proportionately decreased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be increased in proportion to such increase in the aggregate number of shares of Common Stock outstanding. If the Corporation shall at any time or from time to time after the Original Issue Date combine the outstanding shares of Common Stock, the applicable Conversion Price in effect immediately before the combination shall be proportionately increased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be decreased in proportion to such decrease in the aggregate number of shares of Common Stock outstanding. Any adjustment under this subsection shall become effective at the close of business on the date the subdivision or combination becomes effective.

4.6 Adjustment for Certain Dividends and Distributions. In the event the Corporation at any time or from time to time after the Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable on the Common Stock in additional shares of Common Stock, then and in each such event the applicable Conversion Price in effect immediately before such event shall be decreased as of the time of such issuance or, in the event such a record date shall have been fixed, as of the close of business on such record date, by multiplying the applicable Conversion Price then in effect by a fraction:

(1) the numerator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date, and

(2) the denominator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date plus the number of shares of Common Stock issuable in payment of such dividend or distribution.

Notwithstanding the foregoing (a) if such record date shall have been fixed and such dividend is not fully paid or if such distribution is not fully made on the date fixed therefor, the applicable Conversion Price shall be recomputed accordingly as of the close of business on such record date and thereafter the applicable Conversion Price shall be adjusted pursuant to this subsection as of

the time of actual payment of such dividends or distributions; and (b) that no such adjustment shall be made if the holders of the applicable series of Preferred Stock simultaneously receive a dividend or other distribution of shares of Common Stock in a number equal to the number of shares of Common Stock as they would have received if all outstanding shares of the applicable series of Preferred Stock had been converted into Common Stock on the date of such event.

4.7 Adjustments for Other Dividends and Distributions. In the event the Corporation at any time or from time to time after the Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable in securities of the Corporation (other than a distribution of shares of Common Stock in respect of outstanding shares of Common Stock) or in other property and the provisions of Section 1 do not apply to such dividend or distribution, then and in each such event the holders of the applicable series of Preferred Stock shall each receive, simultaneously with the distribution to the holders of Common Stock, a dividend or other distribution of such securities or other property in an amount equal to the amount of such securities or other property as they would have received if all outstanding shares of the applicable series of Preferred Stock had been converted into Common Stock on the date of such event.

4.8 Adjustment for Merger or Reorganization, etc. Subject to the provisions of Section 2.5, if there shall occur any reorganization, recapitalization, reclassification, consolidation or merger involving the Corporation in which the Common Stock (but not the applicable series of Preferred Stock) is converted into or exchanged for securities, cash or other property (other than a transaction covered by Sections 4.4, 4.6 or 4.7), then, following any such reorganization, recapitalization, reclassification, consolidation or merger, each share of the applicable series of Preferred Stock shall thereafter be convertible in lieu of the Common Stock into which it was convertible prior to such event into the kind and amount of securities, cash or other property which a holder of the number of shares of Common Stock of the Corporation issuable upon conversion of one share of the applicable series of Preferred Stock immediately prior to such reorganization, recapitalization, reclassification, consolidation or merger would have been entitled to receive pursuant to such transaction; and, in such case, appropriate adjustment (as determined in good faith by the Board of Directors of the Corporation) shall be made in the application of the provisions in this Section 4 with respect to the rights and interests thereafter of the holders of the applicable series of Preferred Stock, to the end that the provisions set forth in this Section 4 (including provisions with respect to changes in and other adjustments of the applicable Conversion Price) shall thereafter be applicable, as nearly as reasonably may be, in relation to any securities or other property thereafter deliverable upon the conversion of the applicable series of Preferred Stock.

4.9 Certificate as to Adjustments. Upon the occurrence of each adjustment or readjustment of the applicable Conversion Price pursuant to this Section 4, the Corporation at its expense shall, as promptly as reasonably practicable but in any event not later than thirty (30) days thereafter, compute such adjustment or readjustment in accordance with the terms hereof and furnish to each holder of the applicable series of Preferred Stock a certificate setting forth such adjustment or readjustment (including the kind and amount of securities, cash or other property into which the applicable series of Preferred Stock is convertible) and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall,

as promptly as reasonably practicable after the written request at any time of any holder of the applicable series of Preferred Stock (but in any event not later than thirty (30) days thereafter), furnish or cause to be furnished to such holder a certificate setting forth (i) the applicable Conversion Price then in effect, and (ii) the number of shares of Common Stock and the amount, if any, of other securities, cash or property which then would be received upon the conversion of the applicable series of Preferred Stock.

4.10 Notice of Record Date. In the event:

(a) the Corporation shall take a record of the holders of its Common Stock (or other capital stock or securities at the time issuable upon conversion of the applicable series of Preferred Stock) for the purpose of entitling or enabling them to receive any dividend or other distribution, or to receive any right to subscribe for or purchase any shares of capital stock of any class or any other securities, or to receive any other security; or

(b) of any capital reorganization of the Corporation, any reclassification of the Common Stock of the Corporation, or any Deemed Liquidation Event; or

(c) of the voluntary or involuntary dissolution, liquidation or winding-up of the Corporation,

then, and in each such case, the Corporation will send or cause to be sent to the holders of the applicable series of Preferred Stock a notice specifying, as the case may be, (i) the record date for such dividend, distribution or right, and the amount and character of such dividend, distribution or right, or (ii) the effective date on which such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up is proposed to take place, and the time, if any is to be fixed, as of which the holders of record of Common Stock (or such other capital stock or securities at the time issuable upon the conversion of the applicable series of Preferred Stock) shall be entitled to exchange their shares of Common Stock (or such other capital stock or securities) for securities or other property deliverable upon such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up, and the amount per share and character of such exchange applicable to the applicable series of Preferred Stock and the Common Stock. Such notice shall be sent at least five (5) days prior to the record date or effective date for the event specified in such notice.

5. Mandatory Conversion.

5.1 Trigger Events. Upon either (a) the closing of the sale of shares of Common Stock to the public at a price per share of at least $5.16 (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Common Stock), in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, resulting in at least $60,000,000 of gross proceeds to the Corporation or (b) the date and time, or the occurrence of an event, specified by vote or written consent of the holders of at least fifty-five percent (55%) of the then outstanding shares of each class of Preferred Stock (the time of such closing or the date and time specified or the time of the event specified in such vote

or written consent is referred to herein as the **"Mandatory Conversion Time"),** then (i) all outstanding shares of Preferred Stock shall automatically be converted into shares of Common Stock, at the then effective conversion rate as calculated pursuant to Section 4.1.1 and (ii) such shares may not be reissued by the Corporation.

5.2 Procedural Requirements. All holders of record of shares of Preferred Stock shall be sent written notice of the Mandatory Conversion Time and the place designated for mandatory conversion of all such shares of Preferred Stock pursuant to this Section 5. Such notice need not be sent in advance of the occurrence of the Mandatory Conversion Time. Upon receipt of such notice, each holder of shares of Preferred Stock in certificated form shall surrender his, her or its certificate or certificates for all such shares (or, if such holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnity the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation at the place designated in such notice. If so required by the Corporation, any certificates surrendered for conversion shall be endorsed or accompanied by written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or by his, her or its attorney duly authorized in writing. All rights with respect to the Preferred Stock converted pursuant to Section 5.1, including the rights, if any, to receive notices and vote (other than as a holder of Common Stock), will terminate at the Mandatory Conversion Time (notwithstanding the failure of the holder or holders thereof to surrender any certificates at or prior to such time), except only the rights of the holders thereof, upon surrender of any certificate or certificates of such holders (or lost certificate affidavit and agreement) therefor, to receive the items provided for in the next sentence of this Section 5.2. As soon as practicable after the Mandatory Conversion Time and, if applicable, the surrender of any certificate or certificates (or lost certificate affidavit and agreement) for Preferred Stock, the Corporation shall (a) issue and deliver to such holder, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable on such conversion in accordance with the provisions hereof and (b) pay cash as provided in Section 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and the payment of any declared but unpaid dividends on the shares of Preferred Stock converted. Such converted Preferred Stock shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Preferred Stock accordingly.

6. Redeemed or Otherwise Acquired Shares. Any shares of Preferred Stock that are redeemed or otherwise acquired by the Corporation or any of its subsidiaries shall be automatically and immediately cancelled and retired and shall not be reissued, sold or transferred. Neither the Corporation nor any of its subsidiaries may exercise any voting or other rights granted to the holders of Preferred Stock following redemption.

7. Waiver. Any of the rights, powers, preferences and other terms of the any class of Preferred Stock set forth herein may be waived on behalf of all holders of such class of Preferred Stock by the affirmative written consent or vote of the holders of at least fifty-five percent (55%) of the shares of such class of Preferred Stock then outstanding.

8. Notices. Any notice required or permitted by the provisions of this Article Fourth to be given to a holder of shares of Preferred Stock shall be mailed, postage prepaid, to the post office address last shown on the records of the Corporation, or given by electronic communication in compliance with the provisions of the General Corporation Law, and shall be deemed sent upon such mailing or electronic transmission.

FIFTH: Subject to any additional vote required by the Certificate of Incorporation or Bylaws, in furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, repeal, alter, amend and rescind any or all of the Bylaws of the Corporation.

SIXTH: Subject to any additional vote required by the Certificate of Incorporation, the number of directors of the Corporation shall be determined in the manner set forth in the Bylaws of the Corporation.

SEVENTH: Elections of directors need not be by written ballot unless the Bylaws of the Corporation shall so provide.

EIGHTH: Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws of the Corporation may provide. The books of the Corporation may be kept outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation.

NINTH: To the fullest extent permitted by law, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. If the General Corporation Law or any other law of the State of Delaware is amended after approval by the stockholders of this Article Ninth to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the General Corporation Law as so amended. Any repeal or modification of the foregoing provisions of this Article Ninth by the stockholders of the Corporation shall not adversely affect any right or protection of a director of the Corporation existing at the time of, or increase the liability of any director of the Corporation with respect to any acts or omissions of such director occurring prior to, such repeal or modification.

TENTH: The following indemnification provisions shall apply to the persons enumerated below.

1. Right to Indemnification of Directors and Officers. The Corporation shall indemnify and hold harmless, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, any person (an "**Indemnified Person**") who was or is made or is threatened to be made a party or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (a "**Proceeding**"), by reason of the fact that such person, or a person for whom such person is the legal representative, is or was a director or officer of the Corporation or, while a director or officer of the Corporation, is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation or of a partnership, joint venture, limited liability company, trust, enterprise or

nonprofit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys" fees) reasonably incurred by such Indemnified Person in such Proceeding. Notwithstanding the preceding sentence, except as otherwise provided in Section 3 of this Article Tenth, the Corporation shall be required to indemnify an Indemnified Person in connection with a Proceeding (or part thereof) commenced by such Indemnified Person only if the commencement of such Proceeding (or part thereof) by the Indemnified Person was authorized in advance by the Board of Directors.

2. Prepayment of Expenses of Directors and Officers. The Corporation shall pay the expenses (including attorneys' fees) incurred by an Indemnified Person in defending any Proceeding in advance of its final disposition, provided, however, that, to the extent required by law, such payment of expenses in advance of the final disposition of the Proceeding shall be made only upon receipt of an undertaking by the Indemnified Person to repay all amounts advanced if it should be ultimately determined that the Indemnified Person is not entitled to be indemnified under this Article Tenth or otherwise.

3. Claims by Directors and Officers. If a claim for indemnification or advancement of expenses under this Article Tenth is not paid in full within thirty (30) days after a written claim therefor by the Indemnified Person has been received by the Corporation, the Indemnified Person may file suit to recover the unpaid amount of such claim and, if successful in whole or in part, shall be entitled to be paid the expense of prosecuting such claim. In any such action the Corporation shall have the burden of proving that the Indemnified Person is not entitled to the requested indemnification or advancement of expenses under applicable law.

4. Indemnification of Employees and Agents. The Corporation may indemnify and advance expenses to any person who was or is made or is threatened to be made or is otherwise involved in any Proceeding by reason of the fact that such person, or a person for whom such person is the legal representative, is or was an employee or agent of the Corporation or, while an employee or agent of the Corporation, is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation or of a partnership, joint venture, limited liability company, trust, enterprise or nonprofit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses (including attorneys' fees) reasonably incurred by such person in connection with such Proceeding. The ultimate determination of entitlement to indemnification of persons who are non-director or officer employees or agents shall be made in such manner as is determined by the Board of Directors in its sole discretion. Notwithstanding the foregoing sentence, the Corporation shall not be required to indemnify a person in connection with a Proceeding initiated by such person if the Proceeding was not authorized in advance by the Board of Directors.

5. Advancement of Expenses of Employees and Agents. The Corporation may pay the expenses (including attorneys' fees) incurred by an employee or agent in defending any Proceeding in advance of its final disposition on such terms and conditions as may be determined by the Board of Directors.

6. Non-Exclusivity of Rights. The rights conferred on any person by this Article Tenth shall not be exclusive of any other rights which such person may have or hereafter acquire under any statute, provision of the certificate of incorporation, these by-laws, agreement, vote of stockholders or disinterested directors or otherwise.

7. Other Indemnification. The Corporation's obligation, if any, to indemnify any person who was or is serving at its request as a director, officer or employee of another Corporation, partnership, limited liability company, joint venture, trust, organization or other enterprise shall be reduced by any amount such person may collect as indemnification from such other Corporation, partnership, limited liability company, joint venture, trust, organization or other enterprise.

8. Insurance. The Board of Directors may, to the full extent permitted by applicable law as it presently exists, or may hereafter be amended from time to time, authorize an appropriate officer or officers to purchase and maintain at the Corporation's expense insurance: (a) to indemnify the Corporation for any obligation which it incurs as a result of the indemnification of directors, officers and employees under the provisions of this Article Tenth; and (b) to indemnify or insure directors, officers and employees against liability in instances in which they may not otherwise be indemnified by the Corporation under the provisions of this Article Tenth.

9. Amendment or Repeal. Any repeal or modification of the foregoing provisions of this Article Tenth shall not adversely affect any right or protection hereunder of any person in respect of any act or omission occurring prior to the time of such repeal or modification. The rights provided hereunder shall inure to the benefit of any Indemnified Person and such person's heirs, executors and administrators.

ELEVENTH: The Corporation renounces, to the fullest extent permitted by law, any interest or expectancy of the Corporation in, or in being offered an opportunity to participate in, any Excluded Opportunity. An "**Excluded Opportunity**" is any matter, transaction or interest that is presented to, or acquired, created or developed by, or which otherwise comes into the possession of (i) any director or officer of the Corporation who is not an employee of the Corporation or any of its subsidiaries, or (ii) any holder of Preferred Stock or any partner, member, director, stockholder, employee or agent of any such holder, other than someone who is an employee of the Corporation or any of its subsidiaries (collectively, "**Covered Persons**"), unless such matter, transaction or interest is presented to, or acquired, created or developed by, or otherwise comes into the possession of, a Covered Person expressly and solely in such Covered Person's capacity as a director of the Corporation.

* * *

3. That the foregoing amendment and restatement was approved by the holders of the requisite number of shares of this corporation in accordance with Section 228 of the General Corporation Law.

4. That this Third Amended and Restated Certificate of Incorporation, which restates and integrates and further amends the provisions of this Corporation's Certificate of Incorporation, has been duly adopted in accordance with Sections 242 and 245 of the General Corporation Law.

IN WITNESS WHEREOF, this Third Amended and Restated Certificate of Incorporation has been executed by a duly authorized officer of this corporation on this 20th day of February, 2018.

By: /s/ Ted White
Name: Ted White
Title: Chief Executive Officer

EXHIBIT 3.2

BYLAWS OF

VERRICA PHARMACEUTICALS INC.

Adopted August 9th, 2013

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BYLAWS

ARTICLE I — MEETINGS OF STOCKHOLDERS

1.1 ***Place of Meetings*.** Meetings of stockholders of Verrica Pharmaceuticals Inc. (the "**Company**") shall be held at any place, within or outside the State of Delaware, determined by the Company's board of directors (the "**Board**"). The Board may, in its sole discretion, determine that a meeting of stockholders shall not be held at any place, but may instead be held solely by means of remote communication as authorized by Section 211(a)(2) of the Delaware General Corporation Law (the "**DGCL**"). In the absence of any such designation or determination, stockholders' meetings shall be held at the Company's principal executive office.

1.2 ***Annual Meeting*.** An annual meeting of stockholders shall be held for the election of directors at such date and time as may be designated by resolution of the Board from time to time. Any other proper business may be transacted at the annual meeting. The Company shall not be required to hold an annual meeting of stockholders, *provided* that (i) the stockholders are permitted to act by written consent under the Company's certificate of incorporation and these bylaws, (ii) the stockholders take action by written consent to elect directors and (iii) the stockholders unanimously consent to such action or, if such consent is less than unanimous, all of the directorships to which directors could be elected at an annual meeting held at the effective time of such action are vacant and are filled by such action.

1.3 ***Special Meeting*.** A special meeting of the stockholders may be called at any time by the Board, Chairperson of the Board, Chief Executive Officer or President (in the absence of a Chief Executive Officer) or by one or more stockholders holding shares in the aggregate entitled to cast not less than 10% of the votes at that meeting.

If any person(s) other than the Board calls a special meeting, the request shall:

(i) be in writing;

(ii) specify the time of such meeting and the general nature of the business proposed to be transacted; and

(iii) be delivered personally or sent by registered mail or by facsimile transmission to the Chairperson of the Board, the Chief Executive Officer, the President (in the absence of a Chief Executive Officer) or the Secretary of the Company.

The officer(s) receiving the request shall cause notice to be promptly given to the stockholders entitled to vote at such meeting, in accordance with these bylaws, that a meeting will be held at the time requested by the person or persons calling the meeting. No business may be transacted at such special meeting other than the business specified in such notice to stockholders. Nothing contained in this paragraph of this section 1.3 shall be construed as limiting, fixing, or affecting the time when a meeting of stockholders called by action of the Board may be held.

1.4 ***Notice of Stockholders' Meetings*.** Whenever stockholders are required or permitted to take any action at a meeting, a written notice of the meeting shall be given which shall state the place, if any, date and hour of the meeting, the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such meeting, the record date for

determining the stockholders entitled to vote at the meeting, if such date is different from the record date for determining stockholders entitled to notice of the meeting, and, in the case of a special meeting, the purpose or purposes for which the meeting is called. Except as otherwise provided in the DGCL, the certificate of incorporation or these bylaws, the written notice of any meeting of stockholders shall be given not less than 10 nor more than 60 days before the date of the meeting to each stockholder entitled to vote at such meeting as of the record date for determining the stockholders entitled to notice of the meeting.

1.5 ***Quorum.*** Except as otherwise provided by law, the certificate of incorporation or these bylaws, at each meeting of stockholders the presence in person or by proxy of the holders of shares of stock having a majority of the votes which could be cast by the holders of all outstanding shares of stock entitled to vote at the meeting shall be necessary and sufficient to constitute a quorum. Where a separate vote by a class or series or classes or series is required, a majority of the outstanding shares of such class or series or classes or series, present in person or represented by proxy, shall constitute a quorum entitled to take action with respect to that vote on that matter, except as otherwise provided by law, the certificate of incorporation or these bylaws.

If, however, such quorum is not present or represented at any meeting of the stockholders, then either (i) the chairperson of the meeting, or (ii) the stockholders entitled to vote at the meeting, present in person or represented by proxy, shall have the power to adjourn the meeting from time to time, in the manner provided in section 1.6, until a quorum is present or represented.

1.6 ***Adjourned Meeting; Notice.*** Any meeting of stockholders, annual or special, may adjourn from time to time to reconvene at the same or some other place, and notice need not be given of the adjourned meeting if the time, place, if any, thereof, and the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at such adjourned meeting are announced at the meeting at which the adjournment is taken. At the adjourned meeting, the Company may transact any business which might have been transacted at the original meeting. If the adjournment is for more than 30 days, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting. If after the adjournment a new record date for stockholders entitled to vote is fixed for the adjourned meeting, the Board shall fix a new record date for notice of such adjourned meeting in accordance with Section 213(a) of the DGCL and section 1.10 of these bylaws, and shall give notice of the adjourned meeting to each stockholder of record entitled to vote at such adjourned meeting as of the record date fixed for notice of such adjourned meeting.

1.7 ***Conduct of Business.*** Meetings of stockholders shall be presided over by the Chairperson of the Board, if any, or in his or her absence by the Vice Chairperson of the Board, if any, or in the absence of the foregoing persons by the Chief Executive Officer, or in the absence of the foregoing persons by the President, or in the absence of the foregoing persons by a Vice President, or in the absence of the foregoing persons by a chairperson designated by the Board, or in the absence of such designation by a chairperson chosen at the meeting. The Secretary shall act as secretary of the meeting, but in his or her absence the chairperson of the meeting may appoint any person to act as secretary of the meeting. The chairperson of any meeting of stockholders shall determine the order of business and the procedure at the meeting, including such regulation of the manner of voting and the conduct of business.

1.8 ***Voting.*** The stockholders entitled to vote at any meeting of stockholders shall be determined in accordance with the provisions of **section 1.10** of these bylaws, subject to Section 217 (relating to voting rights of fiduciaries, pledgors and joint owners of stock) and Section 218 (relating to voting trusts and other voting agreements) of the DGCL.

Except as may be otherwise provided in the certificate of incorporation, each stockholder entitled to vote at any meeting of stockholders shall be entitled to one vote for each share of capital stock held by such stockholder which has voting power upon the matter in question. Voting at meetings of stockholders need not be by written ballot and, unless otherwise required by law, need not be conducted by inspectors of election unless so determined by the holders of shares of stock having a majority of the votes which could be cast by the holders of all outstanding shares of stock entitled to vote thereon which are present in person or by proxy at such meeting. If authorized by the Board, such requirement of a written ballot shall be satisfied by a ballot submitted by electronic transmission (as defined in section 7.2 of these bylaws), *provided* that any such electronic transmission must either set forth or be submitted with information from which it can be determined that the electronic transmission was authorized by the stockholder or proxy holder.

Except as otherwise required by law, the certificate of incorporation or these bylaws, in all matters other than the election of directors, the affirmative vote of a majority of the voting power of the shares present in person or represented by proxy at the meeting and entitled to vote on the subject matter shall be the act of the stockholders. Except as otherwise required by law, the certificate of incorporation or these bylaws, directors shall be elected by a plurality of the voting power of the shares present in person or represented by proxy at the meeting and entitled to vote on the election of directors. Where a separate vote by a class or series or classes or series is required, in all matters other than the election of directors, the affirmative vote of the majority of shares of such class or series or classes or series present in person or represented by proxy at the meeting shall be the act of such class or series or classes or series, except as otherwise provided by law, the certificate of incorporation or these bylaws.

1.9 ***Stockholder Action by Written Consent Without a Meeting.*** Unless otherwise provided in the certificate of incorporation, any action required by the DGCL to be taken at any annual or special meeting of stockholders of a corporation, or any action which may be taken at any annual or special meeting of such stockholders, may be taken without a meeting, without prior notice, and without a vote, if a consent or consents in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted.

An electronic transmission (as defined in **section 7.2**) consenting to an action to be taken and transmitted by a stockholder or proxy holder, or by a person or persons authorized to act for a stockholder or proxy holder, shall be deemed to be written, signed and dated for purposes of this section, *provided* that any such electronic transmission sets forth or is delivered with information from which the Company can determine (i) that the electronic transmission was transmitted by the stockholder or proxy holder or by a person or persons authorized to act for the stockholder or proxy holder and (ii) the date on which such stockholder or proxy holder or authorized person or persons transmitted such electronic transmission.

In the event that the Board shall have instructed the officers of the Company to solicit the vote or written consent of the stockholders of the Company, an electronic transmission of a stockholder written consent given pursuant to such solicitation may be delivered to the Secretary or the President of the Company or to a person designated by the Secretary or the President. The Secretary or the President of the Company or a designee of the Secretary or the President shall cause any such written consent by electronic transmission to be reproduced in paper form and inserted into the corporate records.

Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not consented in writing and who, if the action had been taken at a meeting, would have been entitled to notice of the meeting if the record date for notice of such meeting had been the date that written consents signed by a sufficient number of

holders to take the action were delivered to the Company as provided in Section 228 of the DGCL. In the event that the action which is consented to is such as would have required the filing of a certificate under any provision of the DGCL, if such action had been voted on by stockholders at a meeting thereof, the certificate filed under such provision shall state, in lieu of any statement required by such provision concerning any vote of stockholders, that written consent has been given in accordance with Section 228 of the DGCL.

1.10 ***Record Dates.*** In order that the Company may determine the stockholders entitled to notice of any meeting of stockholders or any adjournment thereof, the Board may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board and which record date shall not be more than 60 nor less than 10 days before the date of such meeting. If the Board so fixes a date, such date shall also be the record date for determining the stockholders entitled to vote at such meeting unless the Board determines, at the time it fixes such record date, that a later date on or before the date of the meeting shall be the date for making such determination.

If no record date is fixed by the Board, the record date for determining stockholders entitled to notice of and to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held.

A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; *provided, however,* that the Board may fix a new record date for determination of stockholders entitled to vote at the adjourned meeting, and in such case shall also fix as the record date for stockholders entitled to notice of such adjourned meeting the same or an earlier date as that fixed for determination of stockholders entitled to vote in accordance with the provisions of Section 213 of the DGCL and tills Section 1.10 at the adjourned meeting.

In order that the Company may determine the stockholders entitled to consent to corporate action in writing without a meeting, the Board may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board, and which date shall not be more than 10 days after the date upon which the resolution fixing the record date is adopted by the Board. If no record date has been fixed by the Board, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting, when no prior action by the Board is required by law, shall be the first date on which a signed written consent setting forth the action taken or proposed to be taken is delivered to the Company in accordance with applicable law. If no record date has been fixed by the Board and prior action by the Board is required by law, the record date for determining stockholders entitled to consent to corporate action in writing without a meeting shall be at the close of business on the day on which the Board adopts the resolution taking such prior action.

In order that the Company may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the Board may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than 60 days prior to such action. If no record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the Board adopts the resolution relating thereto.

1.11 ***Proxies.*** Each stockholder entitled to vote at a meeting of stockholders or to express consent or dissent to corporate action in writing without a meeting may authorize another person or persons to act for such stockholder by proxy authorized by an instrument in writing or by a transmission permitted by law filed in accordance with the procedure established for the meeting, but no such proxy shall be voted or acted upon after three years from its date, unless the proxy provides for a longer period. The revocability of a proxy that states on its face that it is irrevocable shall be governed by the provisions of Section 212 of the DGCL.

1.12 ***List of Stockholders Entitled to Vote.*** The officer who has charge of the stock ledger of the Company shall prepare and make, at least ten days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting; *provided, however,* if the record date for determining the stockholders entitled to vote is less than 10 days before the meeting date, the list shall reflect the stockholders entitled to vote as of the tenth day before the meeting date, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. The Company shall not be required to include electronic mail addresses or other electronic contact information on such list. Such list shall be open to the examination of any stockholder for any purpose germane to the meeting for a period of at least ten days prior to the meeting: (i) on a reasonably accessible electronic network, *provided* that the information required to gain access to such list is provided with the notice of the meeting, or (ii) during ordinary business hours, at the Company's principal place of business. In the event that the Company determines to make the list available on an electronic network, the Company may take reasonable steps to ensure that such information is available only to stockholders of the Company. If the meeting is to be held at a place, then the list shall be produced and kept at the time and place of the meeting during the whole time thereof, and may be examined by any stockholder who is present. If the meeting is to be held solely by means of remote communication, then the list shall also be open to the examination of any stockholder during the whole time of the meeting on a reasonably accessible electronic network, and the information required to access such list shall be provided with the notice of the meeting.

ARTICLE II — DIRECTORS

2.1 ***Powers.*** The business and affairs of the Company shall be managed by or under the direction of the Board, except as may be otherwise provided in the DGCL or the certificate of incorporation.

2.2 ***Number of Directors.*** The Board shall consist of one or more members, each of whom shall be a natural person. Unless the certificate of incorporation fixes the number of directors, the number of directors shall be determined from time to time by resolution of the Board. No reduction of the authorized number of directors shall have the effect of removing any director before that director's term of office expires.

2.3 ***Election, Qualification and Term of Office of Directors.*** Except as provided in **section 2.4** of these bylaws, and subject to **sections 1.2** and **1.9** of these bylaws, directors shall be elected at each annual meeting of stockholders. Directors need not be stockholders unless so required by the certificate of incorporation or these bylaws. The certificate of incorporation or these bylaws may prescribe other qualifications for directors. Each director shall hold office until such director's successor is elected and qualified or until such director's earlier death, resignation or removal.

2.4 ***Resignation and Vacancies.*** Any director may resign at any time upon notice given in writing or by electronic transmission to the Company. A resignation is effective when the resignation is delivered unless the resignation specifies a later effective date or an effective date determined upon the happening of an event or events. A resignation which is conditioned upon the director failing to receive a specified vote for reelection as a director may provide that it is irrevocable. Unless otherwise provided in

the certificate of incorporation or these bylaws, when one or more directors resign from the Board, effective at a future date, a majority of the directors then in office, including those who have so resigned, shall have power to fill such vacancy or vacancies, the vote thereon to take effect when such resignation or resignations shall become effective.

Unless otherwise provided in the certificate of incorporation or these bylaws:

(i) Vacancies and newly created directorships resulting from any increase in the authorized number of directors elected by all of the stockholders having the right to vote as a single class may be filled by a majority of the directors then in office, although less than a quorum, or by a sole remaining director.

(ii) Whenever the holders of any class or classes of stock or series thereof are entitled to elect one or more directors by the provisions of the certificate of incorporation, vacancies and newly created directorships of such class or classes or series may be filled by a majority of the directors elected by such class or classes or series thereof then in office, or by a sole remaining director so elected.

If at any time, by reason of death or resignation or other cause, the Company should have no directors in office, then any officer or any stockholder or an executor, administrator, trustee or guardian of a stockholder, or other fiduciary entrusted with like responsibility for the person or estate of a stockholder, may call a special meeting of stockholders in accordance with the provisions of the certificate of incorporation or these bylaws, or may apply to the Court of Chancery for a decree summarily ordering an election as provided in Section 211 of the DGCL.

If, at the time of filling any vacancy or any newly created directorship, the directors then in office constitute less than a majority of the whole Board (as constituted immediately prior to any such increase), the Court of Chancery may, upon application of any stockholder or stockholders holding at least 10% of the voting stock at the time outstanding having the right to vote for such directors, summarily order an election to be held to fill any such vacancies or newly created directorships, or to replace the directors chosen by the directors then in office as aforesaid, which election shall be governed by the provisions of Section 211 of the DGCL as far as applicable.

A director elected to fill a vacancy shall be elected for the unexpired term of his or her predecessor in office and until such director's successor is elected and qualified, or until such director's earlier death, resignation or removal.

2.5 ***Place of Meetings; Meetings by Telephone.*** The Board may hold meetings, both regular and special, either within or outside the State of Delaware.

Unless otherwise restricted by the certificate of incorporation or these bylaws, members of the Board, or any committee designated by the Board, may participate in a meeting of the Board, or any committee, by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting shall constitute presence in person at the meeting.

2.6 ***Conduct of Business.*** Meetings of the Board shall be presided over by the Chairperson of the Board, if any, or in his or her absence by the Vice Chairperson of the Board, if any, or in the absence of the foregoing persons by a chairperson designated by the Board, or in the absence of such designation by a chairperson chosen at the meeting. The Secretary shall act as secretary of the meeting, but in his or her absence the chairperson of the meeting may appoint any person to act as secretary of the meeting.

2.7 ***Regular Meetings.*** Regular meetings of the Board may be held without notice at such time and at such place as shall from time to time be determined by the Board.

2.8 ***Special Meetings; Notice.*** Special meetings of the Board for any purpose or purposes may be called at any time by the Chairperson of the Board, the Chief Executive Officer, the President, the Secretary or any two directors.

Notice of the time and place of special meetings shall be:

(i) delivered personally by band, by courier or by telephone;

(ii) sent by United States first-class mail, postage prepaid;

(iii) sent by facsimile; or

(iv) sent by electronic mail,

directed to each director at that director's address, telephone number, facsimile number or electronic mail address, as the case may be, as shown on the Company's records.

If the notice is (i) delivered personally by band, by courier or by telephone, (ii) sent by facsimile or (iii) sent by electronic mail, it shall be delivered or sent at least 24 hours before the time of the holding of the meeting. If the notice is sent by United States mail, it shall be deposited in the United States mail at least four days before the time of the holding of the meeting. Any oral notice may be communicated to the director. The notice need not specify the place of the meeting (if the meeting is to be held at the Company's principal executive office) nor the purpose of the meeting.

2.9 ***Quorum; Voting.*** At all meetings of the Board, a majority of the total authorized number of directors shall constitute a quorum for the transaction of business. If a quorum is not present at any meeting of the Board, then the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum is present. A meeting at which a quorum is initially present may continue to transact business notwithstanding the withdrawal of directors, if any action taken is approved by at least a majority of the required quorum for that meeting.

The vote of a majority of the directors present at any meeting at which a quorum is present shall be the act of the Board, except as may be otherwise specifically provided by statute, the certificate of incorporation or these bylaws.

If the certificate of incorporation provides that one or more directors shall have more or less than one vote per director on any matter, every reference in these bylaws to a majority or other proportion of the directors shall refer to a majority or other proportion of the votes of the directors.

2.10 ***Board Action by Written Consent Without a Meeting.*** Unless otherwise restricted by the certificate of incorporation or these bylaws, any action required or permitted to be taken at any meeting of the Board, or of any committee thereof, may be taken without a meeting if all members of the Board or committee, as the case may be, consent thereto in writing or by electronic transmission and the writing or writings or electronic transmission or transmissions are filed with the minutes of proceedings of the Board or committee. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

2.11 ***Fees and Compensation of Directors.*** Unless otherwise restricted by the certificate of incorporation or these bylaws, the Board shall have the authority to fix the compensation of directors.

2.12 ***Removal of Directors.*** Unless otherwise restricted by statute, the certificate of incorporation or these bylaws, any director or the entire Board may be removed, with or without cause, by the holders of a majority of the shares then entitled to vote at an election of directors.

No reduction of the authorized number of directors shall have the effect of removing any director prior to the expiration of such director's term of office.

ARTICLE III — COMMITTEES

3.1 ***Committees of Directors.*** The Board may designate one or more committees, each committee to consist of one or more of the directors of the Company. The Board may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another member of the Board to act at the meeting in the place of any such absent or disqualified member. Any such committee, to the extent provided in the resolution of the Board or in these bylaws, shall have and may exercise all the powers and authority of the Board in the management of the business and affairs of the Company, and may authorize the seal of the Company to be affixed to all papers that may require it; but no such committee shall have the power or authority to (i) approve or adopt, or recommend to the stockholders, any action or matter (other than the election or removal of directors) expressly required by the DGCL to be submitted to stockholders for approval, or (ii) adopt, amend or repeal any bylaw of the Company.

3.2 ***Committee Minutes.*** Each committee shall keep regular minutes of its meetings and report the same to the Board when required.

3.3 ***Meetings and Actions of Committees.*** Meetings and actions of committees shall be governed by, and held and taken in accordance with, the provisions of:

(i) **section 2.5** (Place of Meetings; Meetings by Telephone);

(ii) **section 2.7** (Regular Meetings);

(iii) **section 2.8** (Special Meetings; Notice);

(iv) **section 2.9** (Quorum; Voting);

(v) **section 2.10** (Board Action by Written Consent Without a Meeting); and

(vi) **section 7.5** (Waiver of Notice)

with such changes in the context of those bylaws as are necessary to substitute the committee and its members for the Board and its members. *However:*

(i) the time of regular meetings of committees may be determined either by resolution of the Board or by resolution of the committee;

(ii) special meetings of committees may also be called by resolution of the Board; and

(iii) notice of special meetings of committees shall also be given to all alternate members, who shall have the right to attend all meetings of the committee. The Board may adopt rules for the government of any committee not inconsistent with the provisions of these bylaws.

Any provision in the certificate of incorporation providing that one or more directors shall have more or less than one vote per director on any matter shall apply to voting in any committee or subcommittee, unless otherwise provided in the certificate of incorporation or these bylaws.

3.4 ***Subcommittees***. Unless otherwise provided in the certificate of incorporation, these bylaws or the resolutions of the Board designating the committee, a committee may create one or more subcommittees, each subcommittee to consist of one or more members of the committee, and delegate to a subcommittee any or all of the powers and authority of the committee.

ARTICLE IV — OFFICERS

4.1 ***Officers.*** The officers of the Company shall be a President and a Secretary. The Company may also have, at the discretion of the Board, a Chairperson of the Board, a Vice Chairperson of the Board, a Chief Executive Officer, one or more Vice Presidents, a Chief Financial Officer, a Treasurer, one or more Assistant Treasurers, one or more Assistant Secretaries, and any such other officers as may be appointed in accordance with the provisions of these bylaws. Any number of offices may be held by the same person.

4.2 ***Appointment of Officers.*** The Board shall appoint the officers of the Company, except such officers as may be appointed in accordance with the provisions of section 4.3 of these bylaws.

4.3 ***Subordinate Officers.*** The Board may appoint, or empower the Chief Executive Officer or, in the absence of a Chief Executive Officer, the President, to appoint, such other officers and agents as the business of the Company may require. Each of such officers and agents shall hold office for such period, have such authority, and perform such duties as are provided in these bylaws or as the Board may from time to time determine.

4.4 ***Removal and Resignation of Officers.*** Any officer may be removed, either with or without cause, by an affirmative vote of the majority of the Board at any regular or special meeting of the Board or, except in the case of an officer chosen by the Board, by any officer upon whom such power of removal may be conferred by the Board.

Any officer may resign at any time by giving written notice to the Company. Any resignation shall take effect at the date of the receipt of that notice or at any later time specified in that notice. Unless otherwise specified in the notice of resignation, the acceptance of the resignation shall not be necessary to make it effective. Any resignation is without prejudice to the rights, if any, of the Company under any contract to which the officer is a party.

4.5 ***Vacancies in Offices.*** Any vacancy occurring in any office of the Company shall be filled by the Board or as provided in section 4.3.

4.6 ***Representation of Shares of Other Corporations.*** Unless otherwise directed by the Board, the President or any other person authorized by the Board or the President is authorized to vote, represent and exercise on behalf of the Company all rights incident to any and all shares of any other corporation or corporations standing in the name of the Company. The authority granted herein may be exercised either by such person directly or by any other person authorized to do so by proxy or power of attorney duly executed by such person having the authority.

4.7 ***Authority and Duties of Officers.*** Except as otherwise provided in these bylaws, the officers of the Company shall have such powers and duties in the management of the Company as may be designated from time to time by the Board and, to the extent not so provided, as generally pertain to their respective offices, subject to the control of the Board.

ARTICLE V — INDEMNIFICATION

5.1 ***Indemnification of Directors and Officers in Third Party Proceedings.*** Subject to the other provisions of this Article V, the Company shall indemnify, to the fullest extent permitted by the DGCL, as now or hereinafter in effect, any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (a "**Proceeding**") (other than an action by or in the right of the Company) by reason of the fact that such person is or was a director or officer of the Company, or is or was a director or officer of the Company serving at the request of the Company as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such Proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Company, and, with respect to any criminal action or proceeding, had no reasonable cause to believe such persons conduct was unlawful. The termination of any Proceeding by judgment, order, settlement, conviction, or upon a plea of *nolo contendere* or its equivalent, shall not, of itself, create a presumption that the person did not act in good faith and in a manner which such person reasonably believed to be in or not opposed to the best interests of the Company, and, with respect to any criminal action or proceeding, had reasonable cause to believe that such person's conduct was unlawful.

5.2 ***Indemnification of Directors and Officers in Actions by or in the Right of the Company.*** Subject to the other provisions of this **Article V**, the Company shall indemnify, to the fullest extent permitted by the DGCL, as now or hereinafter in effect, any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the Company to procure a judgment in its favor by reason of the fact that such person is or was a director or officer of the Company, or is or was a director or officer of the Company serving at the request of the Company as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the Company; except that no indemnification shall be made in respect of any claim, issue or matter as to

which such person shall have been adjudged to be liable to the Company unless and only to the extent that the Court of Chancery or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

5.3 ***Successful Defense.*** To the extent that a present or former director or officer of the Company has been successful on the merits or otherwise in defense of any action, suit or proceeding described in **section 5.1** or **section 5.2**, or in defense of any claim, issue or matter therein, such person shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection therewith.

5.4 ***Indemnification of Others.*** Subject to the other provisions of this **Article V**, the Company shall have power to indemnify its employees and agents to the extent not prohibited by the DGCL or other applicable law. The Board shall have the power to delegate to such person or persons the determination of whether employees or agents shall he indemnified.

5.5 ***Advanced Payment of Expenses.*** Expenses (including attorneys' fees) incurred by an officer or director of the Company in defending any Proceeding shall be paid by the Company in advance of the final disposition of such Proceeding upon receipt of a written request therefor (together with documentation reasonably evidencing such expenses) and an undertaking by or on behalf of the person to repay such amounts if it shall ultimately be determined that the person is not entitled to be indemnified under this **Article V** or the DGCL. Such expenses (including attorneys' fees) incurred by former directors and officers or other employees and agents of the Company or by persons serving at the request of the Company as directors, officers, employees or agents of another corporation, partnership, joint venture, trust or other enterprise may he so paid upon such terms and conditions, if any, as the Company deems appropriate. The right to advancement of expenses shall not apply to any Proceeding for which indemnity is excluded pursuant to these bylaws, but shall apply to any Proceeding referenced in **section 5.6(ii)** or **5.6(iii)** prior to a determination that the person is not entitled to be indemnified by the Company.

Notwithstanding the foregoing, unless otherwise determined pursuant to **section 5.8**, no advance shall be made by the Company to an officer of the Company (except by reason of the fact that such officer is or was a director of the Company, in which event this paragraph shall not apply) in any Proceeding if a determination is reasonably and promptly made (i) by a majority vote of the directors who are not parties to such Proceeding, even though less than a quorum, or (ii) by a committee of such directors designated by majority vote of such directors, even though less than a quorum, or (iii) if there are no such directors, or if such directors so direct, by independent legal counsel in a written opinion, that facts known to the decision-making party at the time such determination is made demonstrate clearly and convincingly that such person acted in bad faith or in a manner that such person did not believe to be in or not opposed to the best interests of the Company.

5.6 ***Limitation on Indemnification.*** Subject to the requirements in **section 5.3** and the DGCL, the Company shall not be obligated to indemnify any person pursuant to this **Article V** in connection with any Proceeding (or any part of any Proceeding):

(i) for which payment has actually been made to or on behalf of such person under any statute, insurance policy, indemnity provision, vote or otherwise, except with respect to any excess beyond the amount paid;

(ii) for an accounting or disgorgement of profits pursuant to Section 16(b) of the Securities Exchange Act of 1934, as amended, or similar provisions of federal, state or local statutory law or common law, if such person is held liable therefor (including pursuant to any settlement arrangements);

(iii) for any reimbursement of the Company by such person of any bonus or other incentive-based or equity-based compensation or of any profits realized by such person from the sale of securities of the Company, as required in each case under the Securities Exchange Act of 1934, as amended (including any such reimbursements that arise from an accounting restatement of the Company pursuant to Section 304 of the Sarbanes-Oxley Act of 2002 (the "**Sarbanes-Oxley Act**"), or the payment to the Company of profits arising from the purchase and sale by such person of securities in violation of Section 306 of the Sarbanes-Oxley Act), if such person is held liable therefor (including pursuant to any settlement arrangements);

(iv) initiated by such person, including any Proceeding (or any part of any Proceeding) initiated by such person against the Company or its directors, officers, employees, agents or other indemnitees, unless (a) the Board authorized the Proceeding (or the relevant part of the Proceeding) prior to its initiation, (b) the Company provides the indemnification, in its sole discretion, pursuant to the powers vested in the Company under applicable law, (c) otherwise required to be made under **section 5.7** or (d) otherwise required by applicable law; or

(v) if prohibited by applicable law.

5.7 ***Determination; Claim.*** If a claim for indemnification or advancement of expenses under this **Article V** is not paid by the Company or on its behalf within 90 days after receipt by the Company of a written request therefor, the claimant shall be entitled to an adjudication by a court of competent jurisdiction of his or her entitlement to such indemnification or advancement of expenses. To the extent not prohibited by law, the Company shall indemnify such person against all expenses actually and reasonably incurred by such person in connection with any action for indemnification or advancement of expenses from the Company under this **Article V**, to the extent such person is successful in such action, and, if requested by such person, shall advance such expenses to such person, subject to the provisions of **section 5.5**. In any such suit, the Company shall, to the fullest extent not prohibited by law, have the burden of proving that the claimant is not entitled to the requested indemnification or advancement of expenses.

5.8 ***Non-Exclusivity of Rights.*** The indemnification and advancement of expenses provided by, or granted pursuant to, this **Article V** shall not be deemed exclusive of any other rights to which those seeking indemnification or advancement of expenses may be entitled under the certificate of incorporation or any statute, bylaw, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in such person's official capacity and as to action in another capacity while holding such office. The Company is specifically authorized to enter into individual contracts with any or all of its directors, officers, employees or agents respecting indemnification and advancement of expenses, to the fullest extent not prohibited by the DGCL or other applicable law.

5.9 ***Insurance.*** The Company may purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the Company, or is or was serving at the request of the Company as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against such person and incurred by such person in any such capacity, or arising out of such person's status as such, whether or not the Company would have the power to indemnify such person against such liability under the provisions of the DGCL.

5.10 ***Survival.*** The rights to indemnification and advancement of expenses conferred by this **Article V** shall continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such a person.

5.11 ***Effect of Repeal or Modification.*** A right to indemnification or to advancement of expenses arising under a provision of the certificate of incorporation or a bylaw shall not be eliminated or impaired by an amendment to the certificate of incorporation or these bylaws after the occurrence of the act or omission that is the subject of the civil, criminal, administrative or investigative action, snit or proceeding for which indemnification or advancement of expenses is sought, unless the provision in effect at the time of such act or omission explicitly authorizes such elimination or impairment after such action or omission has occurred.

5.12 ***Certain Definitions.*** For purposes of this **Article V**, references to the "**Company**" shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors, officers, employees or agents, so that any person who is or was a director, officer, employee or agent of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under the provisions of this **Article V** with respect to the resulting or surviving corporation as such person would have with respect to such constituent corporation if its separate existence had continued. For purposes of this **Article V**, references to "**other enterprises**" shall include employee benefit plans; references to "**fines**" shall include any excise taxes assessed on a person with respect to an employee benefit plan; and references to "**serving at the request of the Company**" shall include any service as a director, officer, employee or agent of the Company which imposes duties on, or involves services by, such director, officer, employee or agent with respect to an employee benefit plan, its participants or beneficiaries; and a person who acted in good faith and in a manner such person reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "**not opposed to the best interests of the Company**" as referred to in this **Article V**.

ARTICLE VI — STOCK

6.1 ***Stock Certificates; Partly Paid Shares.*** The shares of the Company shall be represented by certificates, *provided* that the Board may provide by resolution or resolutions that some or all of any or all classes or series of its stock shall be uncertificated shares. Any such resolution shall not apply to shares represented by a certificate until such certificate is surrendered to the Company. Every holder of stock represented by certificates shall be entitled to have a certificate signed by, or in the name of the Company by the Chairperson of the Board or Vice-Chairperson of the Board, or the President or a Vice-President, and by the Treasurer or an Assistant Treasurer, or the Secretary or an Assistant Secretary of the Company representing the number of shares registered in certificate form. Any or all of the signatures on the certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate has ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the Company with the same effect as if such person were such officer, transfer agent or registrar at the date of issue. The Company shall not have power to issue a certificate in bearer form.

The Company may issue the whole or any part of its shares as partly paid and subject to call for the remainder of the consideration to be paid therefor. Upon the face or back of each stock certificate issued to represent any such partly paid shares, or upon the books and records of the Company in the case of uncertificated partly paid shares, the total amount of the consideration to be paid therefor and the amount paid thereon shall be stated. Upon the declaration of any dividend on fully paid shares, the Company shall declare a dividend upon partly paid shares of the same class, but only upon the basis of the percentage of the consideration actually paid thereon.

6.2 ***Special Designation on Certificates.*** If the Company is authorized to issue more than one class of stock or more than one series of any class, then the powers, the designations, the preferences, and the relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights shall be set forth in full or summarized on the face or back of the certificate that the Company shall issue to represent such class or series of stock; *provided* that, except as otherwise provided in Section 202 of the DGCL, in lieu of the foregoing requirements there may be set forth on the face or back of the certificate that the Company shall issue to represent such class or series of stock, a statement that the Company will furnish without charge to each stockholder who so requests the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights. Within a reasonable time after the issuance or transfer of uncertificated stock, the Company shall send to the registered owner thereof a written notice containing the information required to be set forth or stated on certificates pursuant to this section 6.2 or Sections 156, 202(a) or 218(a) of the DGCL or with respect to this section 6.2 a statement that the Company will furnish without charge to each stockholder who so requests the powers, designations, preferences and relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights. Except as otherwise expressly provided by law, the rights and obligations of the holders of uncertificated stock and the rights and obligations of the holders of certificates representing stock of the same class and series shall be identical.

6.3 ***Lost Certificates.*** Except as provided in this **section 6.3**, no new certificates for shares shall be issued to replace a previously issued certificate unless the latter is surrendered to the Company and cancelled at the same time. The Company may issue a new certificate of stock or uncertificated shares in the place of any certificate theretofore issued by it, alleged to have been lost, stolen or destroyed, and the Company may require the owner of the lost, stolen or destroyed certificate, or such owner's legal representative, to give the Company a bond sufficient to indemnify it against any claim that may be made against it on account of the alleged loss, theft or destruction of any such certificate or the issuance of such new certificate or uncertificated shares.

6.4 ***Dividends.*** The Board, subject to any restrictions contained in the certificate of incorporation or applicable law, may declare and pay dividends upon the shares of the Company's capital stock. Dividends may be paid in cash, in property, or in shares of the Company's capital stock, subject to the provisions of the certificate of incorporation.

The Board may set apart out of any of the funds of the Company available for dividends a reserve or reserves for any proper purpose and may abolish any such reserve.

6.5 ***Stock Transfer Agreements.*** The Company shall have power to enter into and perform any agreement with any number of stockholders of any one or more classes of stock of the Company to restrict the transfer of shares of stock of the Company of any one or more classes owned by such stockholders in any manner not prohibited by the DGCL.

6.6 ***Registered Stockholders.*** The Company:

(i) shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends and to vote as such owner;

(ii) shall be entitled to hold liable for calls and assessments the person registered on its books as the owner of shares; and

(iii) shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of another person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

6.7 ***Transfers.*** Transfers of record of shares of stock of the Company shall be made only upon its books by the holders thereof, in person or by an attorney duly authorized, and, if such stock is certificated, upon the surrender of a certificate or certificates for a like number of shares, properly endorsed or accompanied by proper evidence of succession, assignation or authority to transfer.

ARTICLE VII — MANNER OF GIVING NOTICE AND WAIVER

7.1 ***Notice of Stockholder Meetings.*** Notice of any meeting of stockholders, if mailed, is given when deposited in the United States mail, postage prepaid, directed to the stockholder at such stockholder's address as it appears on the Company's records. An affidavit of the Secretary or an Assistant Secretary of the Company or of the transfer agent or other agent of the Company that the notice has been given shall, in the absence of fraud, be *prima facie* evidence of the facts stated therein.

7.2 ***Notice by Electronic Transmission.*** Without limiting the manner by which notice otherwise may be given effectively to stockholders pursuant to the DGCL, the certificate of incorporation or these bylaws, any notice to stockholders given by the Company under any provision of the DGCL, the certificate of incorporation or these bylaws shall be effective if given by a form of electronic transmission consented to by the stockholder to whom the notice is given. Any such consent shall be revocable by the stockholder by written notice to the Company. Any such consent shall be deemed revoked if:

(i) the Company is unable to deliver by electronic transmission two consecutive notices given by the Company in accordance with such consent; and

(ii) such inability becomes known to the Secretary or an Assistant Secretary of the Company or to the transfer agent, or other person responsible for the giving of notice.

However, the inadvertent failure to treat such inability as a revocation shall not invalidate any meeting or other action.

Any notice given pursuant to the preceding paragraph shall be deemed given:

(i) if by facsimile telecommunication, when directed to a number at which the stockholder has consented to receive notice;

(ii) if by electronic mail, when directed to an electronic mail address at which the stockholder has consented to receive notice;

(iii) if by a posting on an electronic network together with separate notice to the stockholder of such specific posting, upon the later of (A) such posting and (B) the giving of such separate notice; and

(iv) if by any other form of electronic transmission, when directed to the stockholder.

An affidavit of the Secretary or an Assistant Secretary or of the transfer agent or other agent of the Company that the notice has been given by a form of electronic transmission shall, in the absence of fraud, be *prima facie* evidence of the facts stated therein.

An "**electronic transmission**" means any form of communication, not directly involving the physical transmission of paper, that creates a record that may be retained, retrieved, and reviewed by a recipient thereof, and that may be directly reproduced in paper form by such a recipient through an automated process.

Notice by a form of electronic transmission shall not apply to Sections 164, 296, 311, 312 or 324 of the DGCL.

7.3 ***Notice to Stockholders Sharing an Address.*** Except as otherwise prohibited under the DGCL, without limiting the manner by which notice otherwise may be given effectively to stockholders, any notice to stockholders given by the Company under the provisions of the DGCL, the certificate of incorporation or these bylaws shall be effective if given by a single written notice to stockholders who share an address if consented to by the stockholders at that address to whom such notice is given. Any such consent shall be revocable by the stockholder by written notice to the Company. Any stockholder who fails to object in writing to the Company, within 60 days of having been given written notice by the Company of its intention to send the single notice, shall be deemed to have consented to receiving such single written notice.

7.4 ***Notice to Person with Whom Communication is Unlawful.*** Whenever notice is required to be given, under the DGCL, the certificate of incorporation or these bylaws, to any person with whom communication is unlawful, the giving of such notice to such person shall not be required and there shall be no duty to apply to any governmental authority or agency for a license or permit to give such notice to such person. Any action or meeting which shall be taken or held without notice to any such person with whom communication is unlawful shall have the same force and effect as if such notice had been duly given. In the event that the action taken by the Company is such as to require the filing of a certificate under the DGCL, the certificate shall state, if such is the fact and if notice is required, that notice was given to all persons entitled to receive notice except such persons with whom communication is unlawful.

7.5 ***Waiver of Notice.*** Whenever notice is required to be given under any provision of the DGCL, the certificate of incorporation or these bylaws, a written waiver, signed by the person entitled to notice, or a waiver by electronic transmission by the person entitled to notice, whether before or after the time of the event for which notice is to be given, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders need be specified in any written waiver of notice or any waiver by electronic transmission unless so required by the certificate of incorporation or these bylaws.

ARTICLE VIII — GENERAL MATTERS

8.1 ***Fiscal Year.*** The fiscal year of the Company shall be fixed by resolution of the Board and may be changed by the Board.

8.2 ***Seal.*** The Company may adopt a corporate seal, which shall be in such form as may be approved from time to time by the Board. The Company may use the corporate seal by causing it or a facsimile thereof to be impressed or affixed or in any other manner reproduced.

8.3 ***Annual Report.*** The Company shall cause an annual report to be sent to the stockholders of the Company to the extent required by applicable law. If and so long as there are fewer than 100 holders of record of the Company's shares, the requirement of sending an annual report to the stockholders of the Company is expressly waived (to the extent permitted under applicable law).

8.4 ***Construction; Definitions.*** Unless the context requires otherwise, the general provisions, rules of construction, and definitions in the DGCL shall govern the construction of these bylaws. Without limiting the generality of this provision, the singular number includes the plural, the plural number includes the singular, and the term "person" includes both a corporation and a natural person.

ARTICLE IX — AMENDMENTS

These bylaws may be adopted, amended or repealed by the stockholders entitled to vote. However, the Company may, in its certificate of incorporation, confer the power to adopt, amend or repeal bylaws upon the directors. The fact that such power has been so conferred upon the directors shall not divest the stockholders of the power, nor limit their power to adopt, amend or repeal bylaws.

A bylaw amendment adopted by stockholders which specifies the votes that shall be necessary for the election of directors shall not be further amended or repealed by the Board.

Exhibit 10.1

AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

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AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

THIS AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT (this "**Agreement**"), is made as of the 20th day of February, 2018, by and among Verrica Pharmaceuticals Inc., a Delaware corporation (the "**Company**"), and each of the investors listed on Schedule A hereto (whether or not such Investor is a signatory hereto), each of which is referred to in this Agreement as an "**Investor**", each of the stockholders listed on Schedule B hereto, each of whom is referred to herein as a "**Key Holder**" and any Additional Purchaser (as defined in the Purchase Agreement) that becomes a party to this Agreement in accordance with Section 5.9 hereof.

RECITALS

WHEREAS, the Company, the Key Holders and certain of the Investors (collectively, the "**Prior Parties**") entered into that certain Amended and Restated Investors' Rights Agreement dated December 15, 2017 (the "**Prior Agreement**");

WHEREAS, the Prior Parties desire to induce certain of the Investors to purchase shares of the Series C Preferred Stock of the Company pursuant to the Series C Preferred Stock Purchase Agreement of even date herewith (the "**Purchase Agreement**");

WHEREAS, the Prior Agreement can be amended with the written consent of the Company and the holders of a majority of the then outstanding Registrable Securities (as defined therein); and

WHEREAS, the Investors, the Key Holders and the Company hereby agree that this Agreement shall govern the rights of the Investors to cause the Company to register shares of Common Stock issuable to the Investors, to receive certain information from the Company, and to participate in future equity offerings by the Company, and shall govern certain other matters as set forth in this Agreement;

NOW, THEREFORE, the parties hereby agree as follows:

1. Definitions. For purposes of this Agreement:

1.1 "**Affiliate**" means, with respect to any specified Person, any other Person who, directly or indirectly, controls, is controlled by, or is under common control with such Person, including without limitation any general partner, managing member, officer or director of such Person or any venture capital fund now or hereafter existing that is controlled by one or more general partners or managing members of, or shares the same management company with, such Person. For purposes of this definition, one or more Persons will be deemed to be under common control if they have granted to one of such Persons (whether by agreement, granting of a power-of-attorney, or otherwise) the ability to exercise all rights, receive all notices, and take any action under this Agreement.

1.2 "**Common Stock**" means shares of the Company's common stock, par value $0.0001 per share.

1.3 "**Competitor**" means a Person engaged, directly or indirectly (including through any partnership, limited liability company, corporation, joint venture or similar arrangement (whether now existing or formed hereafter)), in the development, manufacture, sale or distribution of products or treatments that are competitive with the current or currently contemplated products or treatments of the Company or its subsidiaries, but shall not include any of (i) any financial investment firm or collective investment vehicle that, together with its Affiliates, holds less than five percent (5)% of the outstanding equity of any Competitor and does not, nor do any of its Affiliates, have a right to designate any members of the Board of Directors of any Competitor, (ii) Perceptive, or (iii) OrbiMed Private Investments VI, LP.

1.4 "**Damages**" means any loss, damage, claim or liability (joint or several) to which a party hereto may become subject under the Securities Act, the Exchange Act, or other federal or state law, insofar as such loss, damage, claim or liability (or any action in respect thereof) arises out of or is based upon: (i) any untrue statement or alleged untrue statement of a material fact contained in any registration statement of the Company, including any preliminary prospectus or final prospectus contained therein or any amendments or supplements thereto; (ii) an 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 (iii) any violation or alleged violation by the indemnifying party (or any of its agents or Affiliates) of the Securities Act, the Exchange Act, any state securities law, or any rule or regulation promulgated under the Securities Act, the Exchange Act, or any state securities law.

1.5 "**Derivative Securities**" means any securities or rights convertible into, or exercisable or exchangeable for (in each case, directly or indirectly), Common Stock, including options and warrants.

1.6 "**Exchange Act**" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

1.7 "**Excluded Registration**" means (i) a registration relating to the sale of securities to employees of the Company or a subsidiary pursuant to a stock option, stock purchase, or similar plan; (ii) a registration relating to an SEC Rule 145 transaction; (iii) a registration on any form that does not include substantially the same information as would be required to be included in a registration statement covering the sale of the Registrable Securities; or (iv) a registration in which the only Common Stock being registered is Common Stock issuable upon conversion of debt securities that are also being registered.

1.8 "**Form S-1**" means such form under the Securities Act as in effect on the date hereof or any successor registration form under the Securities Act subsequently adopted by the SEC.

1.9 "**Form S-3**" means such form under the Securities Act as in effect on the date hereof or any registration form under the Securities Act subsequently adopted by the SEC that permits incorporation of substantial information by reference to other documents filed by the Company with the SEC.

1.10 "**GAAP**" means generally accepted accounting principles in the United States.

1.11 "**Holder**" means any holder of Registrable Securities who is a party to this Agreement.

1.12 "**Immediate Family Member**" means a child, stepchild, grandchild, parent, stepparent, grandparent, spouse, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law, including, adoptive relationships, of a natural person referred to herein.

1.13 "**Initiating Holders**" means, collectively, Holders who properly initiate a registration request under this Agreement.

1.14 "**IPO**" means the Company's first underwritten public offering of its Common Stock under the Securities Act.

1.15 "**Key Holder Registrable Securities**" means (i) the shares of Common Stock held by the Key Holders, and (ii) any Common Stock issued as (or issuable upon the conversion or exercise of any warrant, right, or other security that is issued as) a dividend or other distribution with respect to, or in exchange for or in replacement of such shares.

1.16 "**Major Holder**" means any Investor or Key Holder that, individually or together with such Investor's Affiliates, holds at least 581,395 shares of Registrable Securities (as adjusted for any stock split, stock dividend, combination, or other recapitalization or reclassification effected after the date hereof).

1.17 "**New Securities**" means, collectively, equity securities of the Company, whether or not currently authorized, as well as rights, options, or warrants to purchase such equity securities, or securities of any type whatsoever that are, or may become, convertible or exchangeable into or exercisable for such equity securities.

1.18 "**Person**" means any individual, corporation, partnership, trust, limited liability company, association or other entity.

1.19 "**Preferred Stock**" means the Series A Preferred Stock, the Series B Preferred Stock and the Series C Preferred Stock.

1.20 "**Registrable Securities**" means (i) the Common Stock issuable or issued upon conversion of the Preferred Stock; (ii) any Common Stock, or any Common Stock issued or issuable (directly or indirectly) upon conversion and/or exercise of any other securities of the Company, acquired by the Investors after the date hereof; (iii) the Key Holder Registrable Securities; and (iv) any Common Stock issued as (or issuable upon the conversion or exercise of any warrant, right, or other security that is issued as) a dividend or other distribution with respect to, or in exchange for or in replacement of, the shares referenced in clauses (i), (ii) and (iii)

above; excluding in all cases, however, any Registrable Securities sold by a Person in a transaction in which the applicable rights under this Agreement are not assigned pursuant to Section 5.1, and excluding for purposes of Section 2 any shares for which registration rights have terminated pursuant to Section 2.13 of this Agreement.

1.21 "**Registrable Securities then outstanding**" means the number of shares determined by adding the number of shares of outstanding Common Stock that are Registrable Securities and the number of shares of Common Stock issuable (directly or indirectly) pursuant to then exercisable and/or convertible securities that are Registrable Securities.

1.22 "**Restricted Securities**" means the securities of the Company required to be notated with the legend set forth in Section 2.12(b) hereof.

1.23 "**SEC**" means the Securities and Exchange Commission.

1.24 "**SEC Rule 144**" means Rule 144 promulgated by the SEC under the Securities Act.

1.25 "**SEC Rule 145**" means Rule 145 promulgated by the SEC under the Securities Act.

1.26 "**Securities Act**" means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

1.27 "**Selling Expenses**" means all underwriting discounts, selling commissions, and stock transfer taxes applicable to the sale of Registrable Securities, and fees and disbursements of counsel for any Holder, except for the fees and disbursements of the Selling Holder Counsel borne and paid by the Company as provided in Section 2.6.

1.28 "**Series A Preferred Stock**" means shares of the Company's Series A Preferred Stock, par value $0.0001 per share.

1.29 "**Series B Preferred Stock**" means shares of the Company's Series B Preferred Stock, par value $0.0001 per share.

1.30 "**Series C Preferred Stock**" means shares of the Company's Series C Preferred Stock, par value $0.0001 per share.

2. Registration Rights. The Company covenants and agrees as follows:

2.1 Demand Registration.

(a) Form S-1 Demand. If at any time after the earlier of (i) four (4) years after the date of this Agreement or (ii) one hundred eighty (180) days after the effective date of the registration statement for the IPO, the Company receives a request from Holders of a majority of the Registrable Securities, two-thirds of the shares of Series A Preferred Stock then outstanding, two-thirds of the shares of Series B Preferred Stock then outstanding or two-thirds of the shares of Series C Preferred Stock then outstanding that the Company file a Form S-1

registration statement with respect to at least a majority of the Registrable Securities then outstanding (or a lesser percent if the anticipated aggregate offering price, net of Selling Expenses, would exceed $15 million), then the Company shall (x) within ten (10) days after the date such request is given, give notice thereof (the "**Demand Notice**") to all Holders other than the Initiating Holders; and (y) as soon as practicable, and in any event within ninety (90) days after the date such request is given by the Initiating Holders, file a Form S-1 registration statement under the Securities Act covering all Registrable Securities that the Initiating Holders requested to be registered and any additional Registrable Securities requested to be included in such registration by any other Holders, as specified by notice given by each such Holder to the Company within twenty (20) days of the date the Demand Notice is given, and in each case, subject to the limitations of Sections 2.1(c) and 2.3. The Company shall use its best efforts to cause such registration statement to become effective as soon as reasonably practicable following filing.

(b) Form S-3 Demand. If at any time when it is eligible to use a Form S-3 registration statement, the Company receives a request from Holders of at least a majority of the Registrable Securities then outstanding, two-thirds of the shares Series A Preferred Stock then outstanding, two-thirds of the shares of Series B Preferred Stock then outstanding or two-thirds of the shares Series C Preferred Stock then outstanding that the Company file a Form S-3 registration statement with respect to outstanding Registrable Securities of such Holders having an anticipated aggregate offering price, net of Selling Expenses, of at least $5 million, then the Company shall (i) within ten (10) days after the date such request is given, give a Demand Notice to all Holders other than the Initiating Holders; and (ii) as soon as practicable, and in any event within ninety (90) days after the date such request is given by the Initiating Holders, file a Form S-3 registration statement under the Securities Act covering all Registrable Securities requested to be included in such registration by any other Holders, as specified by notice given by each such Holder to the Company within twenty (20) days of the date the Demand Notice is given, and in each case, subject to the limitations of Sections 2.1(c) and 2.3. The Company shall use its best efforts to cause such registration statement to become effective as soon as reasonably practicable following filing.

(c) Notwithstanding the foregoing obligations, if the Company furnishes to Holders requesting a registration pursuant to this Section 2.1 a certificate signed by the Company's chief executive officer stating that in the good faith judgment of the Company's Board of Directors it would be materially detrimental to the Company and its stockholders for such registration statement to either become effective or remain effective for as long as such registration statement otherwise would be required to remain effective, because such action would (i) materially interfere with a significant acquisition, corporate reorganization, or other similar transaction involving the Company; (ii) require premature disclosure of material information that the Company has a bona fide business purpose for preserving as confidential; or (iii) render the Company unable to comply with requirements under the Securities Act or Exchange Act, then the Company shall have the right to defer taking action with respect to such filing, and any time periods with respect to filing or effectiveness thereof shall be tolled correspondingly, for a period of not more than sixty (60) days after the request of the Initiating Holders is given; provided, however, that the Company may not invoke this right more than once in any twelve (12) month period; and provided further that the Company shall not register any securities for its own account or that of any other stockholder during such sixty (60) day period.

(d) The Company shall not be obligated to effect, or to take any action to effect, any registration pursuant to Section 2.1(a)(i) during the period that is sixty (60) days before the Company's good faith estimate of the date of filing of, and ending on a date that is one hundred eighty (180) days after the effective date of, a Company-initiated registration, provided that the Company is actively employing in good faith commercially reasonable efforts to cause such registration statement to become effective; (ii) after the Company has effected one registration pursuant to Section 2.1(a); or (iii) if the Initiating Holders propose to dispose of shares of Registrable Securities that may be immediately registered on Form S-3 pursuant to a request made pursuant to Section 2.1(b). The Company shall not be obligated to effect, or to take any action to effect, any registration pursuant to Section 2.1(b) (i) during the period that is thirty (30) days before the Company's good faith estimate of the date of filing of, and ending on a date that is ninety (90) days after the effective date of, a Company-initiated registration, provided that the Company is actively employing in good faith commercially reasonable efforts to cause such registration statement to become effective; or (ii) if the Company has effected any registrations pursuant to Section 2.1(b) within the twelve (12) month period immediately preceding the date of such request. A registration shall not be counted as "effected" for purposes of this Section 2.1(d) until such time as the applicable registration statement has been declared effective by the SEC, unless the Initiating Holders withdraw their request for such registration, elect not to pay the registration expenses therefor, and forfeit their right to one demand registration statement pursuant to Section 2.6, in which case such withdrawn registration statement shall be counted as "effected" for purposes of this Section 2.1(d).

2.2 Company Registration. If the Company proposes to register (including, for this purpose, a registration effected by the Company for stockholders other than the Holders) any of its Common Stock under the Securities Act in connection with the public offering of such securities solely for cash (other than in an Excluded Registration), the Company shall, at such time, promptly give each Holder notice of such registration. Upon the request of each Holder given within twenty (20) days after such notice is given by the Company, the Company shall, subject to the provisions of Section 2.3, cause to be registered all of the Registrable Securities that each such Holder has requested to be included in such registration. The Company shall have the right to terminate or withdraw any registration initiated by it under this Section 2.2 before the effective date of such registration, whether or not any Holder has elected to include Registrable Securities in such registration. The expenses (other than Selling Expenses) of such withdrawn registration shall be borne by the Company in accordance with Section 2.6.

2.3 Underwriting Requirements.

(a) If, pursuant to Section 2.1, the Initiating Holders intend to distribute the Registrable Securities covered by their request by means of an underwriting, they shall so advise the Company as a part of their request made pursuant to Section 2.1, and the Company shall include such information in the Demand Notice. The underwriter(s) will be selected by the Company and shall be reasonably acceptable to a majority in interest of the Initiating Holders. In such event, the right of any Holder to include such Holder's Registrable Securities in such registration shall be conditioned upon such Holder's participation in such underwriting and the inclusion of such Holder's Registrable Securities in the underwriting to the extent provided herein. All Holders proposing to distribute their securities through such underwriting shall (together with the Company as provided in Section 2.4(e)) enter into an

underwriting agreement in customary form with the underwriter(s) selected for such underwriting. Notwithstanding any other provision of this Section 2.3, if the managing underwriter(s) advise(s) the Initiating Holders in writing that marketing factors require a limitation on the number of shares to be underwritten, then the Initiating Holders shall so advise all Holders of Registrable Securities that otherwise would be underwritten pursuant hereto, and the number of Registrable Securities that may be included in the underwriting shall be allocated among such Holders of Registrable Securities, including the Initiating Holders, in proportion (as nearly as practicable) to the number of Registrable Securities owned by each Holder or in such other proportion as shall mutually be agreed to by all such selling Holders; provided, however, that the number of Registrable Securities held by the Holders to be included in such underwriting shall not be reduced unless all other securities are first entirely excluded from the underwriting. To facilitate the allocation of shares in accordance with the above provisions, the Company or the underwriters may round the number of shares allocated to any Holder to the nearest one hundred (100) shares.

(b) In connection with any offering involving an underwriting of shares of the Company's capital stock pursuant to Section 2.2, the Company shall not be required to include any of the Holders' Registrable Securities in such underwriting unless the Holders accept the terms of the underwriting as agreed upon between the Company and its underwriters, and then only in such quantity as the underwriters in their sole discretion determine will not jeopardize the success of the offering by the Company. If the total number of securities, including Registrable Securities, requested by stockholders to be included in such offering exceeds the number of securities to be sold (other than by the Company) that the underwriters in their reasonable discretion determine is compatible with the success of the offering, then the Company shall be required to include in the offering only that number of such securities, including Registrable Securities, which the underwriters and the Company in their sole discretion determine will not jeopardize the success of the offering. If the underwriters determine that less than all of the Registrable Securities requested to be registered can be included in such offering, then the Registrable Securities that are included in such offering shall be allocated among the selling Holders in proportion (as nearly as practicable to) the number of Registrable Securities owned by each selling Holder or in such other proportions as shall mutually be agreed to by all such selling Holders, provided that all shares to be excluded shall first be allocated from any stockholders (including management) who are not Investors. To facilitate the allocation of shares in accordance with the above provisions, the Company or the underwriters may round the number of shares allocated to any Holder to the nearest one hundred (100) shares. Notwithstanding the foregoing, in no event shall the number of Registrable Securities included in the offering be reduced unless all other securities (other than securities to be sold by the Company) are first entirely excluded from the offering. For purposes of the provision in this Section 2.3(a) concerning apportionment, for any selling Holder that is a partnership, limited liability company, or corporation, the partners, members, retired partners, retired members, stockholders, and Affiliates of such Holder, or the estates and Immediate Family Members of any such partners, retired partners, members, and retired members and any trusts for the benefit of any of the foregoing Persons, shall be deemed to be a single "selling Holder," and any pro rata reduction with respect to such "selling Holder" shall be based upon the aggregate number of Registrable Securities owned by all Persons included in such "selling Holder," as defined in this sentence.

2.4 Obligations of the Company. Whenever required under this Section 2 to effect the registration of any Registrable Securities, the Company shall, as expeditiously as reasonably possible:

(a) prepare and file with the SEC a registration statement with respect to such Registrable Securities and use its best efforts to cause such registration statement to become effective and, upon the request of the Holders of a majority of the Registrable Securities registered thereunder, keep such registration statement effective for a period of up to one hundred eighty (180) days or, if earlier, until the distribution contemplated in the registration statement has been completed; provided, however, that (i) such one hundred eighty (180) day period shall be extended for a period of time equal to the period the Holder refrains, at the request of an underwriter of Common Stock (or other securities) of the Company, from selling any securities included in such registration, and (ii) in the case of any registration of Registrable Securities on Form S-3 that are intended to be offered on a continuous or delayed basis, subject to compliance with applicable SEC rules, such one hundred eighty (180) day period shall be extended for up to ninety (90) days, if necessary, to keep the registration statement effective until all such Registrable Securities are sold;

(b) prepare and file with the SEC such amendments and supplements to such registration statement, and the prospectus used in connection with such registration statement, as may be necessary to comply with the Securities Act in order to enable the disposition of all securities covered by such registration statement;

(c) furnish to the selling Holders such numbers of copies of a prospectus, including a preliminary prospectus, as required by the Securities Act, and such other documents as the Holders may reasonably request in order to facilitate their disposition of their Registrable Securities;

(d) use its best efforts to register and qualify the securities covered by such registration statement under such other securities or blue-sky laws of such jurisdictions as shall be reasonably requested by the selling Holders; provided that the Company shall not be required to qualify to do business or to file a general consent to service of process in any such states or jurisdictions, unless the Company is already subject to service in such jurisdiction and except as may be required by the Securities Act;

(e) in the event of any underwritten public offering, enter into and perform its obligations under an underwriting agreement, in usual and customary form, with the underwriter(s) of such offering;

(f) use its best efforts to cause all such Registrable Securities covered by such registration statement to be listed on the national securities exchange selected by the Company and approved by the Holders of at least a majority of the Registrable Securities to be registered (such approval not to be unreasonably withheld, conditioned or delayed) and each securities exchange (if any) on which similar securities issued by the Company are then listed;

(g) provide a transfer agent and registrar for all Registrable Securities registered pursuant to this Agreement and provide a CUSIP number for all such Registrable Securities, in each case not later than the effective date of such registration;

(h) promptly make available for inspection by the selling Holders, any managing underwriter(s) participating in any disposition pursuant to such registration statement, and any attorney or accountant or other agent retained by any such underwriter or selected by the selling Holders, all financial and other records, pertinent corporate documents, and properties of the Company, and cause the Company's officers, directors, employees, and independent accountants to supply all information reasonably requested by any such seller, underwriter, attorney, accountant, or agent, in each case, as necessary or advisable to verify the accuracy of the information in such registration statement and to conduct appropriate due diligence in connection therewith;

(i) notify each selling Holder, promptly after the Company receives notice thereof, of the time when such registration statement has been declared effective or a supplement to any prospectus forming a part of such registration statement has been filed; and

(j) after such registration statement becomes effective, notify each selling Holder of any request by the SEC that the Company amend or supplement such registration statement or prospectus.

In addition, the Company shall ensure that, at all times after any registration statement covering a public offering of securities of the Company under the Securities Act shall have become effective, its insider trading policy shall provide that the Company's directors may implement a trading program under Rule 10b5-1 of the Exchange Act.

2.5 Furnish Information. It shall be a condition precedent to the obligations of the Company to take any action pursuant to this Section 2 with respect to the Registrable Securities of any selling Holder that such Holder shall furnish to the Company such information regarding itself, the Registrable Securities held by it, and the intended method of disposition of such securities as is reasonably required to effect the registration of such Holder's Registrable Securities.

2.6 Expenses of Registration. All expenses (other than Selling Expenses) incurred in connection with registrations, filings, or qualifications pursuant to Section 2, including all registration, filing, and qualification fees; printers' and accounting fees; fees and disbursements of counsel for the Company; and the reasonable fees and disbursements, not to exceed $75,000, of one counsel for the selling Holders ("**Selling Holder Counsel**"), shall be borne and paid by the Company; provided, however, that the Company shall not be required to pay for any expenses of any registration proceeding begun pursuant to Section 2.1 if the registration request is subsequently withdrawn at the request of the Holders of a majority of the Registrable Securities to be registered (in which case all selling Holders shall bear such expenses pro rata based upon the number of Registrable Securities that were to be included in the withdrawn registration), unless the Holders of a majority of the Registrable Securities agree to forfeit their right to one registration pursuant to Sections 2.1(a) or 2.1(b), as the case may be. All Selling Expenses relating to Registrable Securities registered pursuant to this Section 2 shall be borne and paid by the Holders pro rata on the basis of the number of Registrable Securities registered on their behalf.

2.7 Delay of Registration. No Holder shall have any right to obtain or seek an injunction restraining or otherwise delaying any registration pursuant to this Agreement as the result of any controversy that might arise with respect to the interpretation or implementation of this Section 2.

2.8 Indemnification. If any Registrable Securities are included in a registration statement under this Section 2:

(a) To the extent permitted by law, the Company will indemnify and hold harmless each selling Holder, and the partners, members, officers, directors, and stockholders of each such Holder; legal counsel and accountants for each such Holder; any underwriter (as defined in the Securities Act) for each such Holder; and each Person, if any, who controls such Holder or underwriter within the meaning of the Securities Act or the Exchange Act, against any Damages, and the Company will pay to each such Holder, underwriter, controlling Person, or other aforementioned Person any legal or other expenses reasonably incurred thereby in connection with investigating or defending any claim or proceeding from which Damages may result, as such expenses are incurred; provided, however, that the indemnity agreement contained in this Section 2.8(a) shall not apply to amounts paid in settlement of any such claim or proceeding if such settlement is effected without the consent of the Company, which consent shall not be unreasonably withheld, nor shall the Company be liable for any Damages to the extent that they arise out of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by or on behalf of any such Holder, underwriter, controlling Person, or other aforementioned Person expressly for use in connection with such registration.

(b) To the extent permitted by law, each selling Holder, severally and not jointly, will indemnify and hold harmless the Company, and each of its directors, each of its officers who has signed the registration statement, each Person (if any), who controls the Company within the meaning of the Securities Act, legal counsel and accountants for the Company, any underwriter (as defined in the Securities Act), any other Holder selling securities in such registration statement, and any controlling Person of any such underwriter or other Holder, against any Damages, in each case only to the extent that such Damages arise out of or are based upon actions or omissions made in reliance upon and in conformity with written information furnished by or on behalf of such selling Holder expressly for use in connection with such registration; and each such selling Holder will pay to the Company and each other aforementioned Person any legal or other expenses reasonably incurred thereby in connection with investigating or defending any claim or proceeding from which Damages may result, as such expenses are incurred; provided, however, that the indemnity agreement contained in this Section 2.8(b) shall not apply to amounts paid in settlement of any such claim or proceeding if such settlement is effected without the consent of the Holder, which consent shall not be unreasonably withheld; and provided further that in no event shall the aggregate amounts payable by any Holder by way of indemnity or contribution under Sections 2.8(b) and 2.8(d) exceed the proceeds from the offering received by such Holder (net of any Selling Expenses paid by such Holder), except in the case of fraud or willful misconduct by such Holder.

(c) Promptly after receipt by an indemnified party under this Section 2.8 of notice of the commencement of any action (including any governmental action) for which a party may be entitled to indemnification hereunder, such indemnified party will, if a claim in respect thereof is to be made against any indemnifying party under this Section 2.8, give the indemnifying party notice of the commencement thereof. The indemnifying party shall have the right to participate in such action and, to the extent the indemnifying party so desires, participate jointly with any other indemnifying party to which notice has been given, and to assume the defense thereof with counsel mutually satisfactory to the parties; provided, however, that an indemnified party (together with all other indemnified parties that may be represented without conflict by one counsel) shall have the right to retain one separate counsel, with the fees and expenses to be paid by the indemnifying party, if representation of such indemnified party by the counsel retained by the indemnifying party would be inappropriate due to actual or potential differing interests between such indemnified party and any other party represented by such counsel in such action. The failure to give notice to the indemnifying party within a reasonable time of the commencement of any such action shall relieve such indemnifying party of any liability to the indemnified party under this Section 2.8, to the extent that such failure materially prejudices the indemnifying party's ability to defend such action. The failure to give notice to the indemnifying party will not relieve it of any liability that it may have to any indemnified party otherwise than under this Section 2.8.

(d) To provide for just and equitable contribution to joint liability under the Securities Act in any case in which either: (i) any party otherwise entitled to indemnification hereunder makes a claim for indemnification pursuant to this Section 2.8 but it is judicially determined (by the entry of a final judgment or decree by a court of competent jurisdiction and the expiration of time to appeal or the denial of the last right of appeal) that such indemnification may not be enforced in such case, notwithstanding the fact that this Section 2.8 provides for indemnification in such case, or (ii) contribution under the Securities Act may be required on the part of any party hereto for which indemnification is provided under this Section 2.8, then, and in each such case, such parties will contribute to the aggregate losses, claims, damages, liabilities, or expenses to which they may be subject (after contribution from others) in such proportion as is appropriate to reflect the relative fault of each of the indemnifying party and the indemnified party in connection with the statements, omissions, or other actions that resulted in such loss, claim, damage, liability, or expense, as well as to reflect any other relevant equitable considerations. The relative fault of the indemnifying party and of the indemnified party shall be determined by reference to, among other things, whether the untrue or allegedly untrue statement of a material fact, or the omission or alleged omission of a material fact, relates to information supplied by the indemnifying party or by the indemnified party and the parties' relative intent, knowledge, access to information, and opportunity to correct or prevent such statement or omission; provided, however, that, in any such case (x) no Holder will be required to contribute any amount in excess of the public offering price of all such Registrable Securities offered and sold by such Holder pursuant to such registration statement, and (y) no Person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) will be entitled to contribution from any Person who was not guilty of such fraudulent misrepresentation; and provided further that in no event shall a Holder's liability pursuant to this Section 2.8(d), when combined with the amounts paid or payable by such Holder pursuant to Section 2.8(b), exceed the proceeds from the offering received by such Holder (net of any Selling Expenses paid by such Holder), except in the case of willful misconduct or fraud by such Holder.

(e) Notwithstanding the foregoing, to the extent that the provisions on indemnification and contribution contained in the underwriting agreement entered into in connection with the underwritten public offering are in conflict with the foregoing provisions, the provisions in the underwriting agreement shall control.

(f) Unless otherwise superseded by an underwriting agreement entered into in connection with the underwritten public offering, the obligations of the Company and Holders under this Section 2.8 shall survive the completion of any offering of Registrable Securities in a registration under this Section 2, and otherwise shall survive the termination of this Agreement.

2.9 Reports Under Exchange Act. With a view to making available to the Holders the benefits of SEC Rule 144 and any other rule or regulation of the SEC that may at any time permit a Holder to sell securities of the Company to the public without registration or pursuant to a registration on Form S-3, the Company shall:

(a) make and keep available adequate current public information, as those terms are understood and defined in SEC Rule 144, at all times after the effective date of the registration statement filed by the Company for the IPO;

(b) file with the SEC in a timely manner all reports and other documents required of the Company under the Securities Act and the Exchange Act (at any time after the Company has become subject to such reporting requirements); and

(c) furnish to any Holder, so long as the Holder owns any Registrable Securities, forthwith upon request (i) to the extent accurate, a written statement by the Company that it has complied with the reporting requirements of SEC Rule 144 (at any time after ninety (90) days after the effective date of the registration statement filed by the Company for the IPO), the Securities Act, and the Exchange Act (at any time after the Company has become subject to such reporting requirements), or that it qualifies as a registrant whose securities may be resold pursuant to Form S-3 (at any time after the Company so qualifies); (ii) a copy of the most recent annual or quarterly report of the Company and such other reports and documents so filed by the Company; and (iii) such other information as may be reasonably requested in availing any Holder of any rule or regulation of the SEC that permits the selling of any such securities without registration (at any time after the Company has become subject to the reporting requirements under the Exchange Act) or pursuant to Form S-3 (at any time after the Company so qualifies to use such form).

2.10 Limitations on Subsequent Registration Rights. From and after the date of this Agreement, the Company shall not, without the prior written consent of the Holders of a majority of the Registrable Securities then outstanding, enter into any agreement with any holder or prospective holder of any securities of the Company that would provide to such holder the right to include securities in any registration on other than either a pro rata basis with respect to the Registrable Securities or on a subordinate basis after all Holders have had the opportunity to include in the registration and offering all shares of Registrable Securities that they wish to so include; provided that this limitation shall not apply to any additional Investor who becomes a party to this Agreement in accordance with Section 5.9.

2.11 "Market Stand-off" Agreement. Each Holder hereby agrees that it will not, without the prior written consent of the managing underwriter, during the period commencing on the date of the final prospectus relating to the registration by the Company of shares of its Common Stock or any other equity securities under the Securities Act on a registration statement on Form S-1 or Form S-3, and ending on the date specified by the Company and the managing underwriter (such period not to exceed one hundred eighty (180) days in the case of the IPO, or such other period as may be requested by the Company or an underwriter to accommodate regulatory restrictions on (1) the publication or other distribution of research reports, and (2) analyst recommendations and opinions, including, but not limited to, the restrictions contained in FINRA Rule 2711(f)(4) or NYSE Rule 472(f)(4), or any successor provisions or amendments thereto, or ninety (90) days in the case of any registration other than the IPO, or such other period as may be requested by the Company or an underwriter to accommodate regulatory restrictions on (1) the publication or other distribution of research reports and (2) analyst recommendations and opinions, including, but not limited to, the restrictions contained in FINRA Rule 2711(f)(4) or NYSE Rule 472(f)(4), or any successor provisions or amendments thereto), (i) lend; offer; pledge; sell; contract to sell; sell any option or contract to purchase; purchase any option or contract to sell; grant any option, right, or warrant to purchase; or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into or exercisable or exchangeable (directly or indirectly) for Common Stock held by the Holder on the effective date of the IPO (and specifically not including any securities acquired in the IPO or thereafter) or (ii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of such securities, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Common Stock or other securities, in cash, or otherwise. The foregoing provisions of this Section 2.11 shall not apply to the sale of any shares to an underwriter pursuant to an underwriting agreement, or the transfer of any shares to any trust for the direct or indirect benefit of the Holder or the immediate family of the Holder, provided that the trustee of the trust agrees to be bound in writing by the restrictions set forth herein, and provided further that any such transfer shall not involve a disposition for value, and shall be applicable to the Holders only if all officers and directors are subject to the same restrictions. The underwriters in connection with such registration are intended third-party beneficiaries of this Section 2.11 and shall have the right, power and authority to enforce the provisions hereof as though they were a party hereto. Each Holder further agrees to execute such agreements as may be reasonably requested by the underwriters in connection with such registration that are consistent with this Section 2.11 or that are necessary to give further effect thereto.

2.12 Restrictions on Transfer.

(a) The Preferred Stock and the Registrable Securities shall not be sold, pledged, or otherwise transferred, and the Company shall not recognize and shall issue stop-transfer instructions to its transfer agent with respect to any such sale, pledge, or transfer, except upon the conditions specified in this Agreement, which conditions are intended to ensure compliance with the provisions of the Securities Act. A transferring Holder will cause any proposed purchaser, pledgee, or transferee of the Preferred Stock and the Registrable Securities held by such Holder to agree to take and hold such securities subject to the provisions and upon the conditions specified in this Agreement.

(b) Each certificate, instrument, or book entry representing (i) the Preferred Stock, (ii) the Registrable Securities, and (iii) any other securities issued in respect of the securities referenced in clauses (i) and (ii), upon any stock split, stock dividend, recapitalization, merger, consolidation, or similar event, shall (unless otherwise permitted by the provisions of Section 2.12(c)) be notated with a legend substantially in the following form:

THE SECURITIES REPRESENTED HEREBY HAVE BEEN ACQUIRED FOR INVESTMENT AND HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933. SUCH SHARES MAY NOT BE SOLD, PLEDGED, OR TRANSFERRED IN THE ABSENCE OF SUCH REGISTRATION OR A VALID EXEMPTION FROM THE REGISTRATION AND PROSPECTUS DELIVERY REQUIREMENTS OF SAID ACT.

THE SECURITIES REPRESENTED HEREBY MAY BE TRANSFERRED ONLY IN ACCORDANCE WITH THE TERMS OF AN AGREEMENT BETWEEN THE COMPANY AND THE STOCKHOLDER, A COPY OF WHICH IS ON FILE WITH THE SECRETARY OF THE COMPANY.

The Holders consent to the Company making a notation in its records and giving instructions to any transfer agent of the Restricted Securities in order to implement the restrictions on transfer set forth in this Section 2.12.

(c) The holder of such Restricted Securities, by acceptance of ownership thereof, agrees to comply in all respects with the provisions of this Section 2. Before any proposed sale, pledge, or transfer of any Restricted Securities, unless there is in effect a registration statement under the Securities Act covering the proposed transaction, the Holder thereof shall give notice to the Company of such Holder's intention to effect such sale, pledge, or transfer. Each such notice shall describe the manner and circumstances of the proposed sale, pledge, or transfer in sufficient detail and, if reasonably requested by the Company, shall be accompanied at such Holder's expense by either (i) a written opinion of legal counsel who shall, and whose legal opinion shall, be reasonably satisfactory to the Company, addressed to the Company, to the effect that the proposed transaction may be effected without registration under the Securities Act; (ii) a "no action" letter from the SEC to the effect that the proposed sale, pledge, or transfer of such Restricted Securities without registration will not result in a recommendation by the staff of the SEC that action be taken with respect thereto; or (iii) any other evidence reasonably satisfactory to counsel to the Company to the effect that the proposed sale, pledge, or transfer of the Restricted Securities may be effected without registration under the Securities Act, whereupon the Holder of such Restricted Securities shall be entitled to sell, pledge, or transfer such Restricted Securities in accordance with the terms of the notice given by the Holder to the Company. The Company will not require such a legal opinion or "no action" letter (x) in any transaction in compliance with SEC Rule 144; or (y) in any transaction in which such Holder distributes Restricted Securities to an Affiliate of such Holder for no consideration; provided that each transferee agrees in writing to be subject to the terms of this Section 2.12.

Each certificate, instrument, or book entry representing the Restricted Securities transferred as above provided shall be notated with, except if such transfer is made pursuant to SEC Rule 144, the appropriate restrictive legend set forth in Section 2.12(b), except that such certificate instrument, or book entry shall not be notated with such restrictive legend if, in the opinion of counsel for such Holder and the Company, such legend is not required in order to establish compliance with any provisions of the Securities Act.

2.13 Termination of Registration Rights. The right of any Holder to request registration or inclusion of Registrable Securities in any registration pursuant to Section 2.1 or 2.2 shall terminate upon the earliest to occur of:

(a) the closing of a Deemed Liquidation Event, as such term is defined in the Company's Third Amended and Restated Certificate of Incorporation; and

(b) the fifth anniversary of the IPO.

3. Information and Observer Rights.

3.1 Delivery of Financial Statements. The Company shall deliver to each Major Holder, provided that the Board of Directors has not reasonably determined that such Major Holder is a Competitor of the Company:

(a) as soon as practicable, but in any event within one hundred twenty (120) days after the end of each fiscal year of the Company (i) a balance sheet as of the end of such year, (ii) statements of income and of cash flows for such year, and (iii) a statement of stockholders' equity as of the end of such year; and

(b) as soon as practicable, but in any event within forty-five (45) days after the end of each of the first three (3) quarters of each fiscal year of the Company, unaudited statements of income and cash flows for such fiscal quarter, and an unaudited balance sheet as of the end of such fiscal quarter, all prepared in accordance with GAAP (except that such financial statements may (i) be subject to normal year-end audit adjustments; and (ii) not contain all notes thereto that may be required in accordance with GAAP).

If, for any period, the Company has any subsidiary whose accounts are consolidated with those of the Company, then in respect of such period the financial statements delivered pursuant to the foregoing sections shall be the consolidated and consolidating financial statements of the Company and all such consolidated subsidiaries. Notwithstanding anything else in this Section 3.1 to the contrary, the Company may cease providing the information set forth in this Section 3.1 during the period starting with the date sixty (60) days before the Company's good-faith estimate of the date of filing of a registration statement if it reasonably concludes it must do so to comply with the SEC rules applicable to such registration statement and related offering; provided that the Company's covenants under this Section 3.1 shall be reinstated at such time as the Company is no longer actively employing its commercially reasonable efforts to cause such registration statement to become effective.

3.2 Confidentiality. Each Investor agrees that such Investor will keep confidential and will not disclose, divulge, or use for any purpose (other than to monitor its investment in the Company) any confidential information obtained from the Company pursuant to the terms of this Agreement (including notice of the Company's intention to file a registration statement), unless such confidential information (a) is known or becomes known to the public in general (other than as a result of a breach of this Section 3.2 by such Investor), (b) is or has been independently developed or conceived by the Investor without use of the Company's confidential information, or (c) is or has been made known or disclosed to the Investor by a third party without a breach of any obligation of confidentiality such third party may have to the Company; provided, however, that an Investor may disclose confidential information (i) to its attorneys, accountants, consultants, and other professionals to the extent necessary to obtain their services in connection with monitoring its investment in the Company; (ii) to any prospective purchaser of any Registrable Securities from such Investor, if such prospective purchaser agrees to be bound by the provisions of this Section 3.2; (iii) to any Affiliate, partner, member, stockholder, or wholly owned subsidiary of such Investor in the ordinary course of business, provided that such Investor informs such Person that such information is confidential and directs such Person to maintain the confidentiality of such information; or (iv) as may otherwise be required by law, provided that the Investor promptly notifies the Company of such disclosure and takes reasonable steps to minimize the extent of any such required disclosure.

3.3 Observer Rights. As long as Perceptive Life Sciences Master Fund, Ltd. ("**Perceptive**") owns not less than 581,395 shares of Registrable Securities (as adjusted for any stock split, stock dividend, combination, or other recapitalization or reclassification effected after the date hereof), the Company shall invite a representative of Perceptive to attend all meetings of its Board of Directors in a nonvoting observer capacity and, in this respect, shall give such representative copies of all notices, minutes, consents, and other materials that it provides to its directors at the same time and in the same manner as provided to such directors; provided, however, that such representative shall agree to hold in confidence and trust and to act in a fiduciary manner with respect to all information so provided; and provided further, that the Company reserves the right to withhold any information and to exclude such representative from any meeting or portion thereof if access to such information or attendance at such meeting would, in the determination of at least a majority of the Company's Board of Directors, adversely affect the attorney-client privilege between the Company and its counsel or result in disclosure of trade secrets or a conflict of interest.

3.4 Matters Requiring Common Directors Approval. The Company and PBM VP Holdings, LLC ("**PBM**") hereby covenant and agree with each of the other Investors and Key Holders that the Company shall not, without the affirmative vote or written consent of the Common Directors (as such term is defined in the Company's Third Amended and Restated Certificate of Incorporation), enter into or be a party to any transaction with, or grant any securities of the Company to, PBM or any Affiliate of PBM or that provides a material benefit to PBM or any Affiliate of PBM, except for transactions, agreements and grants of securities previously issued to PBM or in effect as of the date hereof or transactions made in the ordinary course of business and pursuant to reasonable requirements of the Company's business and, in each case, upon fair and reasonable terms to the Company.

3.5 Termination of Rights. The covenants set forth in Sections 3.1, 3.3 and 3.4 shall terminate and be of no further force or effect (i) immediately before the consummation of the IPO, (ii) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act, or (iii) upon a Deemed Liquidation Event, as such term is defined in the Company's Third Amended and Restated Certificate of Incorporation, whichever event occurs first.

4. Rights to Future Stock Issuances.

4.1 Right of First Offer. Subject to the terms and conditions of this Section 4.1 and applicable securities laws, if the Company proposes to offer or sell any New Securities, the Company shall first offer such New Securities to each Investor. An Investor shall be entitled to apportion the right of first offer hereby granted to it in such proportions as it deems appropriate, among (i) itself, (ii) its Affiliates and (iii) its beneficial interest holders, such as limited partners, members or any other Person having "beneficial ownership," as such term is defined in Rule 13d-3 promulgated under the Exchange Act, of such Investor ("**Investor Beneficial Owners**"); provided that each such Affiliate or Investor Beneficial Owner (x) is not a Competitor, unless such party's purchase of New Securities is otherwise consented to by the Board of Directors, and (y) agrees to enter into this Agreement and the Right of First Refusal and Co-Sale Agreement of even date herewith among the Company, the Investors and the other parties named therein, as an "**Investor**" under each such agreement (provided that any Competitor shall not be entitled to any rights as a Major Investor under Sections 3.1 and 4.1 hereof).

(a) The Company shall give notice (the "**Offer Notice**") to each Investor, stating (i) its bona fide intention to offer such New Securities, (ii) the number of such New Securities to be offered, and (iii) the price and terms, if any, upon which it proposes to offer such New Securities.

(b) By notification to the Company within twenty (20) days after the Offer Notice is given, each Investor may elect to purchase or otherwise acquire, at the price and on the terms specified in the Offer Notice, up to that portion of such New Securities which equals the proportion that the Common Stock then held by such Investor (including all shares of Common Stock then issuable (directly or indirectly) upon conversion and/or exercise, as applicable, of the Preferred Stock and any other Derivative Securities then held by such Investor) bears to the total Common Stock of the Company then outstanding (assuming full conversion and/or exercise, as applicable, of all Preferred Stock and other Derivative Securities). At the expiration of such twenty (20) day period, the Company shall promptly notify each Investor that elects to purchase or acquire all the shares available to it (each, a "**Fully Exercising Investor**") of any other Investor's failure to do likewise. During the ten (10) day period commencing after the Company has given such notice, each Fully Exercising Investor may, by giving notice to the Company, elect to purchase or acquire, in addition to the number of shares specified above, up to that portion of the New Securities for which Investors were entitled to subscribe but that were not subscribed for by the Investors which is equal to the proportion that the Common Stock issued and held, or issuable (directly or indirectly) upon conversion and/or exercise, as applicable, of Preferred Stock and any other Derivative Securities then held, by such Fully Exercising Investor bears to the Common Stock issued and held, or issuable (directly or indirectly) upon conversion and/or exercise, as applicable, of the Preferred Stock and any other Derivative Securities then held, by all Fully Exercising Investors who wish to purchase such unsubscribed shares. The closing of any sale pursuant to this Section 4.1(b) shall occur within the later of ninety (90) days of the date that the Offer Notice is given and the date of initial sale of New Securities pursuant to Section 4.1(c).

(c) If all New Securities referred to in the Offer Notice are not elected to be purchased or acquired as provided in Section 4.1(b), the Company may, during the ninety (90) day period following the expiration of the periods provided in Section 4.1(b), offer and sell the remaining unsubscribed portion of such New Securities to any Person or Persons at a price not less than, and upon terms no more favorable to the offeree than, those specified in the Offer Notice. If the Company does not enter into an agreement for the sale of the New Securities within such period, or if such agreement is not consummated within thirty (30) days of the execution thereof, the right provided hereunder shall be deemed to be revived and such New Securities shall not be offered unless first reoffered to the Investors in accordance with this Section 4.1.

(d) The right of first offer in this Section 4.1 shall not be applicable to (i) Exempted Securities (as defined in the Company's Third Amended and Restated Certificate of Incorporation); (ii) shares of Common Stock issued in the IPO; and (iii) the issuance of shares of Series C Preferred Stock to Additional Purchasers pursuant to Section 1.3 of the Purchase Agreement.

(e) The right of first offer set forth in this Section 4.1 shall terminate with respect to any Investor who fails to purchase, in any transaction subject to this Section 4.1 after the date hereof, all of such Investor's pro rata amount of the New Securities allocated (or, if less than such Investor's pro rata amount is offered by the Company, such lesser amount so offered) to such Investor pursuant to this Section 4.1.

(f) Notwithstanding any provision hereof to the contrary, in lieu of complying with the provisions of this Section 4.1, the Company may elect to give notice to the Investors within thirty (30) days after the issuance of New Securities. Such notice shall describe the type, price, and terms of the New Securities. Each Investor shall have twenty (20) days from the date notice is given to elect to purchase up to the number of New Securities that would, if purchased by such Investor, maintain such Investor's percentage-ownership position, calculated as set forth in Section 4.1(b) before giving effect to the issuance of such New Securities. The closing of such sale shall occur within sixty (60) days of the date notice is given to the Investors.

4.2 Termination. The covenants set forth in Section 4.1 shall terminate and be of no further force or effect (i) immediately before the consummation of the IPO, (ii) when the Company first becomes subject to the periodic reporting requirements of Section 12(g) or 15(d) of the Exchange Act, or (iii) upon a Deemed Liquidation Event, as such term is defined in the Company's Third Amended and Restated Certificate of Incorporation, whichever event occurs first, and, as to each Investor, in accordance with Section 4.1(e).

5. Miscellaneous.

5.1 Successors and Assigns. The rights under this Agreement may be assigned (but only with all related obligations) by a Holder to a transferee of Registrable Securities that (i) is an Affiliate of a Holder; (ii) is a Holder's Immediate Family Member or trust for the benefit of an individual Holder or one or more of such Holder's Immediate Family Members; or (iii) after such transfer, holds at least 193,799 shares of Registrable Securities (subject to appropriate adjustment for stock splits, stock dividends, combinations, and other recapitalizations); provided, however, that (x) the Company is, within a reasonable time after such transfer, furnished with written notice of the name and address of such transferee and the Registrable Securities with respect to which such rights are being transferred; and (y) such transferee agrees in a written instrument delivered to the Company to be bound by and subject to the terms and conditions of this Agreement, including the provisions of Section 2.11. For the purposes of determining the number of shares of Registrable Securities held by a transferee, the holdings of a transferee (1) that is an Affiliate or stockholder of a Holder; (2) who is a Holder's Immediate Family Member; or (3) that is a trust for the benefit of an individual Holder or such Holder's Immediate Family Member shall be aggregated together and with those of the transferring Holder; provided further that all transferees who would not qualify individually for assignment of rights shall have a single attorney-in-fact for the purpose of exercising any rights, receiving notices, or taking any action under this Agreement. The terms and conditions of this Agreement inure to the benefit of and are binding upon the respective successors and permitted assignees of the parties. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and permitted assignees any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided herein.

5.2 Governing Law. This Agreement shall be governed by the internal law of the State of Delaware.

5.3 Counterparts. This Agreement may be executed in two (2) or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, *e.g.*, www.docusign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes**.**

5.4 Titles and Subtitles. The titles and subtitles used in this Agreement are for convenience only and are not to be considered in construing or interpreting this Agreement.

5.5 Notices. All notices and other communications given or made pursuant to this Agreement shall be in writing and shall be deemed effectively given upon the earlier of actual receipt or (i) personal delivery to the party to be notified; (ii) when sent, if sent by electronic mail during the recipient's normal business hours, and if not sent during normal business hours, then on the recipient's next business day; (iii) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid; or (iv) one (1) business day after the business day of deposit with a nationally recognized overnight courier, freight prepaid, specifying next-day delivery, with written verification of receipt. All communications shall be sent to the respective parties at their addresses as set forth on Schedule A hereto, or to the principal office of the Company and to the attention of the Chief Executive Officer, in the case of the Company, or to such email address, or address as subsequently modified by written notice given in accordance with this Section 5.5. If notice is given to the Company, a copy shall also be sent to Verrica Pharmaceuticals Inc., c/o PBM Capital Group, LLC, 200 Garrett Street, Suite S, Charlottesville, VA 22902, Attn: Corporate Counsel, E-mail: XXX.

5.6 Amendments and Waivers. Any term of this Agreement may be amended (other than Section 3.4) and the observance of any term of this Agreement may be waived (either generally or in a particular instance, and either retroactively or prospectively) only with the written consent of the Company and the holders of a majority of the Registrable Securities then outstanding; provided that the Company may in its sole discretion waive compliance with Section 2.12(c) (and the Company's failure to object promptly in writing after notification of a proposed assignment allegedly in violation of Section 2.12(c) shall be deemed to be a waiver); and provided further that any provision hereof may be waived by any waiving party on such party's own behalf, without the consent of any other party. Notwithstanding the foregoing, this Agreement may not be amended or terminated and the observance of any term hereof may not be waived (i) with respect to any Investor without the written consent of such Investor, unless such amendment, termination, or waiver applies to all Investors in the same fashion (it being agreed that a waiver of the provisions of Section 4 with respect to a particular transaction shall be deemed to apply to all Investors in the same fashion if such waiver does so by its terms, notwithstanding the fact that certain Investors may nonetheless, by agreement with the Company, purchase securities in such transaction), (ii) without the written consent of holders of a majority of the Series A Preferred Stock, if such amendment, termination or waiver would be materially detrimental to the rights of the holders of Series A Prefered Stock, (iii) without the written consent of holders of a majority of the Series B Preferred Stock, if such amendment, termination or waiver would be materially detrimental to the rights of the holders of Series B Prefered Stock, or (iv) without the written consent of holders of at least fifty-five percent (55%) of the Series C Preferred Stock, if such amendment, termination or waiver would be materially detrimental to the rights of the holders of Series C Prefered Stock. Further, this Agreement may not be amended, and no provision hereof may be waived, in each case, in any way which would adversely affect the rights of the Key Holders hereunder in a manner disproportionate to any adverse effect such amendment or waiver would have on the rights of the Investors hereunder, without also the written consent of the holders of at least a majority of the Registrable Securities held by the Key Holders. The Company shall give prompt notice of any amendment or termination hereof or waiver hereunder to any party hereto that did not consent in writing to such amendment, termination, or waiver. Any amendment, termination, or waiver effected in accordance with this Section 5.6 shall be binding on all parties hereto, regardless of whether any such party has consented thereto. The provisions of Section 3.4 may be amended or waived (either generally or in a particular instance and either retroactively or prospectively) only with the written consent of (i) the Company, and (ii) the holders of a majority of the Registrable Securities then outstanding (excluding, for purposes of this clause (ii), PBM and the Registrable Securities held by PBM). No waivers of or exceptions to any term, condition, or provision of this Agreement, in any one or more instances, shall be deemed to be or construed as a further or continuing waiver of any such term, condition, or provision.

5.7 Severability. In case any one or more of the provisions contained in this Agreement is for any reason held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision of this Agreement, and such invalid, illegal, or unenforceable provision shall be reformed and construed so that it will be valid, legal, and enforceable to the maximum extent permitted by law.

5.8 Aggregation of Stock. All shares of Registrable Securities held or acquired by Affiliates shall be aggregated together for the purpose of determining the availability of any rights under this Agreement and such Affiliates may apportion such rights as among themselves in any manner they deem appropriate.

5.9 Additional Investors. Notwithstanding anything to the contrary contained herein, if the Company issues additional shares of the Company's Series C Preferred Stock after the date hereof, whether pursuant to the Purchase Agreement or otherwise, any purchaser of such shares of Series C Preferred Stock may become a party to this Agreement by executing and delivering an additional counterpart signature page to this Agreement, and thereafter shall be deemed an "Investor" for all purposes hereunder. No action or consent by the Investors shall be required for such joinder to this Agreement by such additional Investor, so long as such additional Investor has agreed in writing to be bound by all of the obligations as an "Investor" hereunder.

5.10 Entire Agreement. This Agreement (including any Schedules and Exhibits hereto) constitutes the full and entire understanding and agreement among the parties with respect to the subject matter hereof, and any other written or oral agreement relating to the subject matter hereof existing between the parties is expressly canceled.

5.11 Dispute Resolution. The parties (a) hereby irrevocably and unconditionally submit to the jurisdiction of the state courts of Delaware and to the jurisdiction of the United States District Court for the District of Delaware for the purpose of any suit, action or other proceeding arising out of or based upon this Agreement, (b) agree not to commence any suit, action or other proceeding arising out of or based upon this Agreement except in the state courts of Delaware or the United States District Court for the District of Delaware, and (c) hereby waive, and agree not to assert, by way of motion, as a defense, or otherwise, in any such suit, action or proceeding, any claim that it is not subject personally to the jurisdiction of the above-named courts, that its property is exempt or immune from attachment or execution, that the suit, action or proceeding is brought in an inconvenient forum, that the venue of the suit, action or proceeding is improper or that this Agreement or the subject matter hereof may not be enforced in or by such court. Each party will bear its own costs in respect of any disputes arising under this Agreement.

WAIVER OF JURY TRIAL: EACH PARTY HEREBY WAIVES ITS RIGHTS TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION BASED UPON OR ARISING OUT OF THIS AGREEMENT, THE OTHER TRANSACTION DOCUMENTS, THE SECURITIES OR THE SUBJECT MATTER HEREOF OR THEREOF. THE SCOPE OF THIS WAIVER IS INTENDED TO BE ALL-ENCOMPASSING OF ANY AND ALL DISPUTES THAT MAY BE FILED IN ANY COURT AND THAT RELATE TO THE SUBJECT MATTER OF THIS TRANSACTION, INCLUDING, WITHOUT LIMITATION, CONTRACT CLAIMS, TORT CLAIMS (INCLUDING NEGLIGENCE), BREACH OF DUTY CLAIMS, AND ALL OTHER COMMON LAW AND STATUTORY CLAIMS. THIS SECTION HAS BEEN FULLY DISCUSSED BY EACH OF THE PARTIES HERETO AND THESE PROVISIONS WILL NOT BE SUBJECT TO ANY EXCEPTIONS. EACH PARTY HERETO HEREBY FURTHER WARRANTS AND REPRESENTS THAT SUCH PARTY HAS REVIEWED THIS WAIVER WITH ITS LEGAL COUNSEL, AND THAT SUCH PARTY KNOWINGLY AND VOLUNTARILY WAIVES ITS JURY TRIAL RIGHTS FOLLOWING CONSULTATION WITH LEGAL COUNSEL.

5.12 Delays or Omissions. No delay or omission to exercise any right, power, or remedy accruing to any party under this Agreement, upon any breach or default of any other party under this Agreement, shall impair any such right, power, or remedy of such nonbreaching or nondefaulting party, nor shall it be construed to be a waiver of or acquiescence to any such breach or default, or to any similar breach or default thereafter occurring, nor shall any waiver of any single breach or default be deemed a waiver of any other breach or default theretofore or thereafter occurring. All remedies, whether under this Agreement or by law or otherwise afforded to any party, shall be cumulative and not alternative.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

VERRICA PHARMACEUTICALS INC.

By: /s/ Ted White
Name: Ted White
Title: Chief Executive Officer

KEY HOLDERS:

/s/ Matthew Davidson
Name: Matthew Davidson

PBM VP HOLDINGS, LLC

By: /s/ Paul Manning
Name: Paul Manning
Title: CEO

IN WITNESS WHEREOF, the undersigned Investor has executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

PERCEPTIVE LIFE SCIENCES MASTER FUND, LTD.

By: /s/ James Mannix
Name: James Mannix
Title: COO

IN WITNESS WHEREOF, the undersigned Investor has executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

ORBIMED PRIVATE INVESTMENTS VI, LP

By: OrbiMed Capital GP VI LLC,
Its General Partner

By: OrbiMed Advisors LLC,
Its Managing Member

By: /s/ Jonathan Silverstein
Name: Jonathan Silverstein
Title: Member

IN WITNESS WHEREOF, the undersigned Investor has executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

GTAM2 2012 Trust

By: /s/ Pamela M. Packard
Name: Pamela M. Packard
Title: Trustee

IN WITNESS WHEREOF, the undersigned Investor has executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

/s/ Stephen M. Goldman

Stephen M. Goldman

IN WITNESS WHEREOF, the undersigned Investor has executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

/s/ Alfred Novak

Alfred J. Novak

IN WITNESS WHEREOF, the undersigned Investor has executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

/s/ Neetu K. Dhaliwal

Neetu K. Dhaliwal

IN WITNESS WHEREOF, the undersigned Investor has executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

PBM Captial Group, LLC

By: /s/ Paul Manning
Name: Paul B. Manning
Title: CEO

IN WITNESS WHEREOF, the undersigned Investor has executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

/s/ Peter Young

Peter Young

IN WITNESS WHEREOF, the undersigned Investor has executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

/s/ Peter Reins

Peter Reins

IN WITNESS WHEREOF, the undersigned Investor has executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

/s/ Tom Selinger

Tom Selinger

IN WITNESS WHEREOF, the undersigned Investor has executed this Amended and Restated Investors' Rights Agreement as of the date first written above.

INVESTOR:

/s/ Jennifer Reynolds

Jennifer Reynolds

SCHEDULE A

Investors

Name	Address
Perceptive Life Sciences Master Fund Ltd.	51 Astor Place, 10th Floor New York, NY 10003 Attn: XXX E-mail: XXX With a copy to: Tannenbaum Helpern Syracuse & Hirschtritt LLP 900 Third Avenue New York, NY 10022 Attn: XXX E-mail: XXX
OrbiMed Private Investments VI, LP	601 Lexington Avenue, 54th Floor New York, NY 10022 Attention: XXX E-mail: XXX
PBM VP Holdings, LLC	200 Garrett Street, Suite S Charlottesville, VA 22902 Attention: XXX Email: XXX
WS Investment Company LLC (2015A)	650 Page Mill Road Palo Alto CA 94304 Attention: XXX Email: XXX
Peter A. Davidson and Idelle M. Davidson, as Trustees of the Davidson Family Trust UAD April 23, 1986	XXX
David S. Wesley and Nadine S. Wesley, Trustees of the Wesley Family Trust, dated October 21, 1987, as amended	XXX
Gregory S. Wesley	XXX
Gordon R. Kanofsky and Marcia B. Kanofsky, Trustees of the Kanofsky Family Trust, dated January 27, 1998, as amended	XXX
Benjamin and Erin Davidson	XXX

Name	Address
VV Holdings LLC	11766 Wilshire Blvd., 9th Floor Los Angeles, CA 90025 Attention: XXX XXX
Ace Vision, LLC	2340 San Ysidro Dr Beverly Hills, CA 90210 Attention: XXX XXX
The Glenn A. Oclassen 2016 Trust dated November 30, 2016	XXX
Mark de Souza	XXX
CoValence, Inc.	100 San Mateo Dr Menlo Park, CA 94025 Attention: XXX XXX
Damian deGoa	XXX
Michael McCauley	XXX
Donald Mosman	XXX
James C. Reebals	XXX
Jayson Rieger	XXX
Eugene Scavola	XXX
Russell Schundler	XXX
Sean Stalfort	XXX
Benjamin Garrett	XXX
Divakar Gupta	XXX
Adam Burke	XXX
Steven Goldman	XXX
Jeffrey Leerink	XXX
Al Novak	XXX

Name	Address
BKB Growth Investments, LLC	c/o Tiger Lily Capital, LLC 200 Garrett Street, Suite O Charlottesville, VA 22902 XXX
Clarke Argenbright	XXX
Luisa Assink	XXX
Joshua Batman	XXX
Tamara Chapman	XXX
Wendie Charles	XXX
Christa Cosner	XXX
Stephanie Culley	XXX
Jessica DeGraff	XXX
Thomas Flores	XXX
David Glover	XXX
Christopher Henry	XXX
Susan Hughes	XXX
Aaron Hullett	XXX
Caroline Kimpfler	XXX
Jeffrey Kopocis	XXX
Brian Lamb	XXX
Scott McGibney	XXX
Jodi Mills	XXX
Margaret Post	XXX
Matthew Powell	XXX
Christine Ratliff	XXX
Gregory Bennett Reck	XXX

Name	Address
David Schnur	XXX
Diana Smalls	XXX
Candace Taylor	XXX
Vanessa Warner	XXX
Lee Williams	XXX
Melissa Woodruff	XXX

SCHEDULE B

Key Holders

Name	Address
Matthew Davidson	XXX
PBM VP Holdings, LLC	XXX

VERRICA PHARMACEUTICALS INC.

2013 EQUITY INCENTIVE PLAN

1. Purposes of the Plan. The purposes of this Plan are:

- to attract and retain the best available personnel for positions of substantial responsibility,
- to provide additional incentive to Employees, Directors and Consultants, and
- to promote the success of the Company's business.

The Plan permits the grant of Incentive Stock Options, Nonstatutory Stock Options, Stock Appreciation Rights, Restricted Stock and Restricted Stock Units.

2. Definitions. As used herein, the following definitions will apply:

(a) "Administrator" means the Board or any of its Committees as will be administering the Plan, in accordance with Section 4 of the Plan.

(b) "Applicable Laws" means the requirements relating to the administration of equity-based awards under U.S. state corporate laws, U.S. federal and state securities laws, the Code, any stock exchange or quotation system on which the Common Stock is listed or quoted and the applicable laws of any foreign country or jurisdiction where Awards are, or will be, granted under the Plan.

(c) "Award" means, individually or collectively, a grant under the Plan of Options, Stock Appreciation Rights, Restricted Stock, or Restricted Stock Units.

(d) "Award Agreement" means the written or electronic agreement setting forth the terms and provisions applicable to each Award granted under the Plan. The Award Agreement is subject to the terms and conditions of the Plan.

(e) "Board" means the Board of Directors of the Company.

(f) "Change in Control" means the occurrence of any of the following events:

(i) Change in Ownership of the Company. A change in the ownership of the Company which occurs on the date that any one person, or more than one person acting as a group ("Person"), acquires ownership of the stock of the Company that, together with the stock held by such Person, constitutes more than 50% of the total voting power of the stock of the Company, except that any change in the ownership of the stock of the Company as a result of a private financing of the Company that is approved by the Board will not be considered a Change in Control; or

(ii) Change in Effective Control of the Company. If the Company has a class of securities registered pursuant to Section 12 of the Exchange Act, a change in the effective control of the Company which occurs on the date that a majority of members of the Board is replaced during any twelve (12) month period by Directors whose appointment or election is not endorsed by a majority of the members of the Board prior to the date of the appointment or election. For purposes of this clause (ii), if any Person is considered to be in effective control of the Company, the acquisition of additional control of the Company by the same Person will not be considered a Change in Control; or

(iii) Change in Ownership of a Substantial Portion of the Company's Assets. A change in the ownership of a substantial portion of the Company's assets which occurs on the date that any Person acquires (or has acquired during the twelve (12) month period ending on the date of the most recent acquisition by such person or persons) assets from the Company that have a total gross fair market value equal to or more than 50% of the total gross fair market value of all of the assets of the Company immediately prior to such acquisition or acquisitions. For purposes of this subsection (iii), gross fair market value means the value of the assets of the Company, or the value of the assets being disposed of, determined without regard to any liabilities associated with such assets.

For purposes of this Section 2(f), persons will be considered to be acting as a group if they are owners of a corporation that enters into a merger, consolidation, purchase or acquisition of stock, or similar business transaction with the Company.

Notwithstanding the foregoing, a transaction will not be deemed a Change in Control unless the transaction qualifies as a change in control event within the meaning of Code Section 409A, as it has been and may be amended from time to time, and any proposed or final Treasury Regulations and Internal Revenue Service guidance that has been promulgated or may be promulgated thereunder from time to time.

Further and for the avoidance of doubt, a transaction will not constitute a Change in Control if: (i) its sole purpose is to change the jurisdiction of the Company's incorporation, or (ii) its sole purpose is to create a holding company that will be owned in substantially the same proportions by the persons who held the Company's securities immediately before such transaction.

(g) "Code" means the Internal Revenue Code of 1986, as amended. Any reference to a section of the Code herein will be a reference to any successor or amended section of the Code.

(h) "Committee" means a committee of Directors or of other individuals satisfying Applicable Laws appointed by the Board, or by the compensation committee of the Board, in accordance with Section 4 hereof.

(i) "Common Stock" means the common stock of the Company.

(j) "Company" means Verrica Pharmaceuticals Inc., a Delaware corporation, or any successor thereto.

(k) "Consultant" means any person, including an advisor, engaged by the Company or a Parent or Subsidiary to render services to such entity.

(l) "Director" means a member of the Board.

(m) "Disability" means total and permanent disability as defined in Code Section 22(e)(3), provided that in the case of Awards other than Incentive Stock Options, the Administrator in its discretion may determine whether a permanent and total disability exists in accordance with uniform and non-discriminatory standards adopted by the Administrator from time to time.

(n) "Employee" means any person, including officers and Directors, employed by the Company or any Parent or Subsidiary of the Company. Neither service as a Director nor payment of a director's fee by the Company will be sufficient to constitute "employment" by the Company.

(o) "Exchange Act" means the Securities Exchange Act of 1934, as amended.

(p) "Exchange Program" means a program under which (i) outstanding Awards are surrendered or cancelled in exchange for Awards of the same type (which may have higher or lower exercise prices and different terms), Awards of a different type, and/or cash, (ii) Participants would have the opportunity to transfer any outstanding Awards to a financial institution or other person or entity selected by the Administrator, and/or (iii) the exercise price of an outstanding Award is reduced or increased. The Administrator will determine the terms and conditions of any Exchange Program in its sole discretion.

(q) "Fair Market Value" means, as of any date, the value of Common Stock determined as follows:

(i) If the Common Stock is listed on any established stock exchange or a national market system, including without limitation the Nasdaq Global Select Market, the Nasdaq Global Market or the Nasdaq Capital Market of The Nasdaq Stock Market, its Fair Market Value will be the closing sales price for such stock (or the closing bid, if no sales were reported) as quoted on such exchange or system on the day of determination, as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable;

(ii) If the Common Stock is regularly quoted by a recognized securities dealer but selling prices are not reported, the Fair Market Value of a Share will be the mean between the high bid and low asked prices for the Common Stock on the day of determination (or, if no bids and asks were reported on that date, as applicable, on the last trading date such bids and asks were reported), as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable; or

(iii) In the absence of an established market for the Common Stock, the Fair Market Value will be determined in good faith by the Administrator.

(r) "Incentive Stock Option" means an Option that by its terms qualifies and is otherwise intended to qualify as an incentive stock option within the meaning of Code Section 422 and the regulations promulgated thereunder.

(s) "Nonstatutory Stock Option" means an Option that by its terms does not qualify or is not intended to qualify as an Incentive Stock Option.

(t) "Option" means a stock option granted pursuant to the Plan.

(u) "Parent" means a "parent corporation," whether now or hereafter existing, as defined in Code Section 424(e).

(v) "Participant" means the holder of an outstanding Award.

(w) "Period of Restriction" means the period during which the transfer of Shares of Restricted Stock are subject to restrictions and therefore, the Shares are subject to a substantial risk of forfeiture. Such restrictions may be based on the passage of time, the achievement of target levels of performance, or the occurrence of other events as determined by the Administrator.

(x) "Plan" means this 2104 Equity Incentive Plan.

(y) "Restricted Stock" means Shares issued pursuant to an Award of Restricted Stock under Section 8 of the Plan, or issued pursuant to the early exercise of an Option.

(z) "Restricted Stock Unit" means a bookkeeping entry representing an amount equal to the Fair Market Value of one Share, granted pursuant to Section 9. Each Restricted Stock Unit represents an unfunded and unsecured obligation of the Company.

(aa) "Service Provider" means an Employee, Director or Consultant.

(bb) "Share" means a share of the Common Stock, as adjusted in accordance with Section 13 of the Plan.

(cc) "Stock Appreciation Right" means an Award, granted alone or in connection with an Option, that pursuant to Section 7 is designated as a Stock Appreciation Right.

(dd) "Subsidiary" means a "subsidiary corporation," whether now or hereafter existing, as defined in Code Section 424(f).

3. Stock Subject to the Plan.

(a) Stock Subject to the Plan. Subject to the provisions of Section 13 of the Plan, the maximum aggregate number of Shares that may be subject to Awards and sold under the Plan is 1,000,000 Shares. The Shares may be authorized but unissued, or reacquired Common Stock.

(b) Lapsed Awards. If an Award expires or becomes unexercisable without having been exercised in full, is surrendered pursuant to an Exchange Program, or, with respect to Restricted Stock or Restricted Stock Units, is forfeited to or repurchased by the Company due to the failure to vest, the unpurchased Shares (or for Awards other than Options or Stock Appreciation Rights the forfeited or repurchased Shares) which were subject thereto will become available for future grant or sale under the Plan (unless the Plan has terminated). With respect to Stock Appreciation Rights, only Shares actually issued pursuant to a Stock Appreciation Right will cease to be available under the Plan; all remaining Shares under Stock Appreciation Rights will remain available for future grant or sale under the Plan (unless the Plan has terminated). Shares that have actually been issued under the Plan under any Award will not be returned to the Plan and will not become available for future distribution under the Plan; provided, however, that if Shares issued pursuant to Awards of Restricted Stock or Restricted Stock Units are repurchased by the Company or are forfeited to the Company due to the failure to vest, such Shares will become available for future grant under the Plan. Shares used to pay the exercise price of an Award or to satisfy the tax withholding obligations related to an Award will become available for future grant or sale under the Plan. To the extent an Award under the Plan is paid out in cash rather than Shares, such cash payment will not result in reducing the number of Shares available for issuance under the Plan. Notwithstanding the foregoing and, subject to adjustment as provided in Section 13, the maximum number of Shares that may be issued upon the exercise of Incentive Stock Options will equal the aggregate Share number stated in Section 3(a), plus, to the extent allowable under Code Section 422 and the Treasury Regulations promulgated thereunder, any Shares that become available for issuance under the Plan pursuant to Section 3(b).

(c) Share Reserve. The Company, during the term of this Plan, will at all times reserve and keep available such number of Shares as will be sufficient to satisfy the requirements of the Plan.

4. Administration of the Plan.

(a) Procedure.

(i) Multiple Administrative Bodies. Different Committees with respect to different groups of Service Providers may administer the Plan.

(ii) Other Administration. Other than as provided above, the Plan will be administered by (A) the Board or (B) a Committee, which Committee will be constituted to satisfy Applicable Laws.

(b) Powers of the Administrator. Subject to the provisions of the Plan, and in the case of a Committee, subject to the specific duties delegated by the Board to such Committee, the Administrator will have the authority, in its discretion:

(i) to determine the Fair Market Value;

(ii) to select the Service Providers to whom Awards may be granted hereunder;

(iii) to determine the number of Shares to be covered by each Award granted hereunder;

(iv) to approve forms of Award Agreements for use under the Plan;

(v) to determine the terms and conditions, not inconsistent with the terms of the Plan, of any Award granted hereunder. Such terms and conditions include, but are not limited to, the exercise price, the time or times when Awards may be exercised (which may be based on performance criteria), any vesting acceleration or waiver of forfeiture restrictions, and any restriction or limitation regarding any Award or the Shares relating thereto, based in each case on such factors as the Administrator will determine;

(vi) to institute and determine the terms and conditions of an Exchange Program;

(vii) to construe and interpret the terms of the Plan and Awards granted pursuant to the Plan;

(viii) to prescribe, amend and rescind rules and regulations relating to the Plan, including rules and regulations relating to sub-plans established for the purpose of satisfying applicable foreign laws or for qualifying for favorable tax treatment under applicable foreign laws;

(ix) to modify or amend each Award (subject to Section 18(c) of the Plan), including but not limited to the discretionary authority to extend the post-termination exercisability period of Awards and to extend the maximum term of an Option (subject to Section 6(d));

(x) to allow Participants to satisfy withholding tax obligations in a manner prescribed in Section 14;

(xi) to authorize any person to execute on behalf of the Company any instrument required to effect the grant of an Award previously granted by the Administrator;

(xii) to allow a Participant to defer the receipt of the payment of cash or the delivery of Shares that otherwise would be due to such Participant under an Award; and

(xiii) to make all other determinations deemed necessary or advisable for administering the Plan.

(c) Effect of Administrator's Decision. The Administrator's decisions, determinations and interpretations will be final and binding on all Participants and any other holders of Awards.

5. Eligibility. Nonstatutory Stock Options, Stock Appreciation Rights, Restricted Stock, and Restricted Stock Units may be granted to Service Providers. Incentive Stock Options may be granted only to Employees.

6. Stock Options.

(a) Grant of Options. Subject to the terms and provisions of the Plan, the Administrator, at any time and from time to time, may grant Options in such amounts as the Administrator, in its sole discretion, will determine.

(b) Option Agreement. Each Award of an Option will be evidenced by an Award Agreement that will specify the exercise price, the term of the Option, the number of Shares subject to the Option, the exercise restrictions, if any, applicable to the Option, and such other terms and conditions as the Administrator, in its sole discretion, will determine.

(c) Limitations. Each Option will be designated in the Award Agreement as either an Incentive Stock Option or a Nonstatutory Stock Option. Notwithstanding such designation, however, to the extent that the aggregate Fair Market Value of the Shares with respect to which Incentive Stock Options are exercisable for the first time by the Participant during any calendar year (under all plans of the Company and any Parent or Subsidiary) exceeds one hundred thousand dollars ($100,000), such Options will be treated as Nonstatutory Stock Options. For purposes of this Section 6(c), Incentive Stock Options will be taken into account in the order in which they were granted, the Fair Market Value of the Shares will be determined as of the time the Option with respect to such Shares is granted, and calculation will be performed in accordance with Code Section 422 and Treasury Regulations promulgated thereunder.

(d) Term of Option. The term of each Option will be stated in the Award Agreement; provided, however, that the term will be no more than ten (10) years from the date of grant thereof. In the case of an Incentive Stock Option granted to a Participant who, at the time the Incentive Stock Option is granted, owns stock representing more than ten percent (10%) of the total combined voting power of all classes of stock of the Company or any Parent or Subsidiary, the term of the Incentive Stock Option will be five (5) years from the date of grant or such shorter term as may be provided in the Award Agreement.

(e) Option Exercise Price and Consideration.

(i) Exercise Price. The per Share exercise price for the Shares to be issued pursuant to the exercise of an Option will be determined by the Administrator, but will be no less than one hundred percent (100%) of the Fair Market Value per Share on the date of grant. In addition, in the case of an Incentive Stock Option granted to an Employee who owns stock representing more than ten percent (10%) of the voting power of all classes of stock of the Company or any Parent or Subsidiary, the per Share exercise price will be no less than one hundred ten percent (110%) of the Fair Market Value per Share on the date of grant. Notwithstanding the foregoing provisions of this Section 6(e)(i), Options may be granted with a per Share exercise price of less than one hundred percent (100%) of the Fair Market Value per Share on the date of grant pursuant to a transaction described in, and in a manner consistent with, Code Section 424(a).

(ii) Waiting Period and Exercise Dates. At the time an Option is granted, the Administrator will fix the period within which the Option may be exercised and will determine any conditions that must be satisfied before the Option may be exercised.

(iii) Form of Consideration. The Administrator will determine the acceptable form of consideration for exercising an Option, including the method of payment. In the case of an Incentive Stock Option, the Administrator will determine the acceptable form of consideration at the time of grant. Such consideration may consist entirely of: (1) cash; (2) check; (3) promissory note, to the extent permitted by Applicable Laws, (4) other Shares, provided that such Shares have a Fair Market Value on the date of surrender equal to the aggregate exercise price of the Shares as to which such Option will be exercised and provided further that accepting such Shares will not result in any adverse accounting consequences to the Company, as the Administrator determines in its sole discretion; (5) consideration received by the Company under cashless exercise program (whether through a broker or otherwise) implemented by the Company in connection with the Plan; (6) by net exercise, (7) such other consideration and method of payment for the issuance of Shares to the extent permitted by Applicable Laws, or (8) any combination of the foregoing methods of payment. In making its determination as to the type of consideration to accept, the Administrator will consider if acceptance of such consideration may be reasonably expected to benefit the Company.

(f) Exercise of Option.

(i) Procedure for Exercise; Rights as a Stockholder. Any Option granted hereunder will be exercisable according to the terms of the Plan and at such times and under such conditions as determined by the Administrator and set forth in the Award Agreement. An Option may not be exercised for a fraction of a Share.

An Option will be deemed exercised when the Company receives: (i) notice of exercise (in such form as the Administrator may specify from time to time) from the person entitled to exercise the Option, and (ii) full payment for the Shares with respect to which the Option is exercised (together with applicable tax withholding). Full payment may consist of any consideration and method of payment authorized by the Administrator and permitted by the Award Agreement and the Plan. Shares issued upon exercise of an Option will be issued in the name of the Participant or, if requested by the Participant, in the name of the Participant and his or her spouse. Until the Shares are issued (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), no right to vote or receive dividends or any other rights as a stockholder will exist with respect to the Shares subject to an Option, notwithstanding the exercise of the Option. The Company will issue (or cause to be issued) such Shares promptly after the Option is exercised. No adjustment will be made for a dividend or other right for which the record date is prior to the date the Shares are issued, except as provided in Section 13 of the Plan.

Exercising an Option in any manner will decrease the number of Shares thereafter available, both for purposes of the Plan and for sale under the Option, by the number of Shares as to which the Option is exercised.

(ii) Termination of Relationship as a Service Provider. If a Participant ceases to be a Service Provider, other than upon the Participant's termination as the result of the Participant's death or Disability, the Participant may exercise his or her Option within thirty (30) days of termination, or such longer period of time as is specified in the Award Agreement (but in no event later than the expiration of the term of such Option as set forth in the Award Agreement) to the extent that the Option is vested on the date of termination. Unless otherwise provided by the Administrator, if on the date of termination the Participant is not vested as to his or her entire Option, the Shares covered by the unvested portion of the Option will revert to the Plan. If after termination the Participant does not exercise his or her Option within the time specified by the Administrator, the Option will terminate, and the Shares covered by such Option will revert to the Plan.

(iii) Disability of Participant. If a Participant ceases to be a Service Provider as a result of the Participant's Disability, the Participant may exercise his or her Option within six (6) months of termination, or such longer period of time as is specified in the Award Agreement (but in no event later than the expiration of the term of such Option as set forth in the Award Agreement) to the extent the Option is vested on the date of termination. Unless otherwise provided by the Administrator, if on the date of termination the Participant is not vested as to his or her entire Option, the Shares covered by the unvested portion of the Option will revert to the Plan. If after termination the Participant does not exercise his or her Option within the time specified herein, the Option will terminate, and the Shares covered by such Option will revert to the Plan.

(iv) Death of Participant. If a Participant dies while a Service Provider, the Option may be exercised within six (6) months following the Participant's death, or within such longer period of time as is specified in the Award Agreement (but in no event later than the expiration of the term of such Option as set forth in the Award Agreement) to the extent that the Option is vested on the date of death, by the Participant's designated beneficiary, provided such beneficiary has been designated prior to the Participant's death in a form acceptable to the Administrator. If no such beneficiary has been designated by the Participant, then such Option may be exercised by the personal representative of the Participant's estate or by the person(s) to whom the Option is transferred pursuant to the Participant's will or in accordance with the laws of descent and distribution. Unless otherwise provided by the Administrator, if at the time of death Participant is not vested as to his or her entire Option, the Shares covered by the unvested portion of the Option will immediately revert to the Plan. If the Option is not so exercised within the time specified herein, the Option will terminate, and the Shares covered by such Option will revert to the Plan.

7. Stock Appreciation Rights.

(a) Grant of Stock Appreciation Rights. Subject to the terms and conditions of the Plan, a Stock Appreciation Right may be granted to Service Providers at any time and from time to time as will be determined by the Administrator, in its sole discretion.

(b) Number of Shares. The Administrator will have complete discretion to determine the number of Shares subject to any Award of Stock Appreciation Rights.

(c) Exercise Price and Other Terms. The per Share exercise price for the Shares that will determine the amount of the payment to be received upon exercise of a Stock Appreciation Right as set forth in Section 7(f) will be determined by the Administrator and will be no less than one hundred percent (100%) of the Fair Market Value per Share on the date of grant. Otherwise, the Administrator, subject to the provisions of the Plan, will have complete discretion to determine the terms and conditions of Stock Appreciation Rights granted under the Plan.

(d) Stock Appreciation Right Agreement. Each Stock Appreciation Right grant will be evidenced by an Award Agreement that will specify the exercise price, the term of the Stock Appreciation Right, the conditions of exercise, and such other terms and conditions as the Administrator, in its sole discretion, will determine.

(e) Expiration of Stock Appreciation Rights. A Stock Appreciation Right granted under the Plan will expire upon the date determined by the Administrator, in its sole discretion, and set forth in the Award Agreement. Notwithstanding the foregoing, the rules of Section 6(d) relating to the maximum term and Section 6(f) relating to exercise also will apply to Stock Appreciation Rights.

(f) Payment of Stock Appreciation Right Amount. Upon exercise of a Stock Appreciation Right, a Participant will be entitled to receive payment from the Company in an amount determined by multiplying:

(i) The difference between the Fair Market Value of a Share on the date of exercise over the exercise price; times

(ii) The number of Shares with respect to which the Stock Appreciation Right is exercised.

At the discretion of the Administrator, the payment upon Stock Appreciation Right exercise may be in cash, in Shares of equivalent value, or in some combination thereof.

8. Restricted Stock.

(a) Grant of Restricted Stock. Subject to the terms and provisions of the Plan, the Administrator, at any time and from time to time, may grant Shares of Restricted Stock to Service Providers in such amounts as the Administrator, in its sole discretion, will determine.

(b) Restricted Stock Agreement. Each Award of Restricted Stock will be evidenced by an Award Agreement that will specify the Period of Restriction, the number of Shares granted, and such other terms and conditions as the Administrator, in its sole discretion, will determine. Unless the Administrator determines otherwise, the Company as escrow agent will hold Shares of Restricted Stock until the restrictions on such Shares have lapsed.

(c) Transferability. Except as provided in this Section 8 or as the Administrator determines, Shares of Restricted Stock may not be sold, transferred, pledged, assigned, or otherwise alienated or hypothecated until the end of the applicable Period of Restriction.

(d) Other Restrictions. The Administrator, in its sole discretion, may impose such other restrictions on Shares of Restricted Stock as it may deem advisable or appropriate.

(e) Removal of Restrictions. Except as otherwise provided in this Section 8, Shares of Restricted Stock covered by each Restricted Stock grant made under the Plan will be released from escrow as soon as practicable after the last day of the Period of Restriction or at such other time as the Administrator may determine. The Administrator, in its discretion, may accelerate the time at which any restrictions will lapse or be removed.

(f) Voting Rights. During the Period of Restriction, Service Providers holding Shares of Restricted Stock granted hereunder may exercise full voting rights with respect to those Shares, unless the Administrator determines otherwise.

(g) Dividends and Other Distributions. During the Period of Restriction, Service Providers holding Shares of Restricted Stock will be entitled to receive all dividends and other distributions paid with respect to such Shares, unless the Administrator provides otherwise. If any such dividends or distributions are paid in Shares, the Shares will be subject to the same restrictions on transferability and forfeitability as the Shares of Restricted Stock with respect to which they were paid.

(h) Return of Restricted Stock to Company. On the date set forth in the Award Agreement, the Restricted Stock for which restrictions have not lapsed will revert to the Company and again will become available for grant under the Plan.

9. Restricted Stock Units.

(a) Grant. Restricted Stock Units may be granted at any time and from time to time as determined by the Administrator. After the Administrator determines that it will grant Restricted Stock Units, it will advise the Participant in an Award Agreement of the terms, conditions, and restrictions related to the grant, including the number of Restricted Stock Units.

(b) Vesting Criteria and Other Terms. The Administrator will set vesting criteria in its discretion, which, depending on the extent to which the criteria are met, will determine the number of Restricted Stock Units that will be paid out to the Participant. The Administrator may set vesting criteria based upon the achievement of Company-wide, business unit, or individual goals (including, but not limited to, continued employment or service), or any other basis determined by the Administrator in its discretion.

(c) Earning Restricted Stock Units. Upon meeting the applicable vesting criteria, the Participant will be entitled to receive a payout as determined by the Administrator. Notwithstanding the foregoing, at any time after the grant of Restricted Stock Units, the Administrator, in its sole discretion, may reduce or waive any vesting criteria that must be met to receive a payout.

(d) Form and Timing of Payment. Payment of earned Restricted Stock Units will be made as soon as practicable after the date(s) determined by the Administrator and set forth in the Award Agreement. The Administrator, in its sole discretion, may settle earned Restricted Stock Units in cash, Shares, or a combination of both.

(e) Cancellation. On the date set forth in the Award Agreement, all unearned Restricted Stock Units will be forfeited to the Company.

10. Compliance With Code Section 409A. Awards will be designed and operated in such a manner that they are either exempt from the application of, or comply with, the requirements of Code Section 409A, except as otherwise determined in the sole discretion of the Administrator. The Plan and each Award Agreement under the Plan is intended to meet the requirements of Code Section 409A and will be construed and interpreted in accordance with such intent, except as otherwise determined in the sole discretion of the Administrator. To the extent that an Award or payment, or the settlement or deferral thereof, is subject to Code Section 409A the Award will be granted, paid, settled or deferred in a manner that will meet the requirements of Code Section 409A, such that the grant, payment, settlement or deferral will not be subject to the additional tax or interest applicable under Code Section 409A.

11. Leaves of Absence/Transfer Between Locations. Unless the Administrator provides otherwise, vesting of Awards granted hereunder will be suspended during any unpaid leave of absence. A Participant will not cease to be an Employee in the case of (i) any leave of absence approved by the Company or (ii) transfers between locations of the Company or between the Company, its Parent, or any Subsidiary. For purposes of Incentive Stock Options, no such leave may exceed three (3) months, unless reemployment upon expiration of such leave is guaranteed by statute or contract. If reemployment upon expiration of a leave of absence approved by the Company is not so guaranteed, then six (6) months following the first (1st) day of such leave, any Incentive Stock Option held by the Participant will cease to be treated as an Incentive Stock Option and will be treated for tax purposes as a Nonstatutory Stock Option.

12. Limited Transferability of Awards.

(a) Unless determined otherwise by the Administrator, Awards may not be sold, pledged, assigned, hypothecated, or otherwise transferred in any manner other than by will or by the laws of descent and distribution, and may be exercised, during the lifetime of the Participant, only by the Participant. If the Administrator makes an Award transferable, such Award may only be transferred (i) by will, (ii) by the laws of descent and distribution, or (iii) as permitted by Rule 701 of the Securities Act of 1933, as amended (the "Securities Act").

(b) Further, until the Company becomes subject to the reporting requirements of Section 13 or 15(d) of the Exchange Act, or after the Administrator determines that it is, will, or may no longer be relying upon the exemption from registration under the Exchange Act as set forth in Rule 12h-1(f) promulgated under the Exchange Act, an Option, or prior to exercise, the Shares subject to the Option, may not be pledged, hypothecated or otherwise transferred or disposed of, in any manner, including by entering into any short position, any "put equivalent position" or any "call equivalent position" (as defined in Rule 16a-1(h) and Rule 16a-1(b) of the Exchange Act, respectively), other than to (i) persons who are "family members" (as defined in Rule 701(c)(3) of the Securities Act) through gifts or domestic relations orders, or (ii) to an executor or guardian of the Participant upon the death or disability of the Participant. Notwithstanding the foregoing sentence, the Administrator, in its sole discretion, may determine to permit transfers to the Company or in connection with a Change in Control or other acquisition transactions involving the Company to the extent permitted by Rule 12h-1(f).

13. Adjustments; Dissolution or Liquidation; Merger or Change in Control.

(a) Adjustments. In the event that any dividend or other distribution (whether in the form of cash, Shares, other securities, or other property), recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase, or exchange of Shares or other securities of the Company, or other change in the corporate structure of the Company affecting the Shares occurs, the Administrator, in order to prevent diminution or enlargement of the benefits or potential benefits intended to be made available under the Plan, will adjust the number and class of shares of stock that may be delivered under the Plan and/or the number, class, and price of shares of stock covered by each outstanding Award; provided, however, that the Administrator will make such adjustments to an Award required by Section 25102(o) of the California Corporations Code to the extent the Company is relying upon the exemption afforded thereby with respect to the Award.

(b) Dissolution or Liquidation. In the event of the proposed dissolution or liquidation of the Company, the Administrator will notify each Participant as soon as practicable prior to the effective date of such proposed transaction. To the extent it has not been previously exercised, an Award will terminate immediately prior to the consummation of such proposed action.

(c) Merger or Change in Control. In the event of a merger of the Company with or into another corporation or other entity or a Change in Control, each outstanding Award will be treated as the Administrator determines (subject to the provisions of the following paragraph) without a Participant's consent, including, without limitation, that (i) Awards will be assumed, or substantially equivalent Awards will be substituted, by the acquiring or succeeding corporation (or an affiliate thereof) with appropriate adjustments as to the number and kind of shares and prices; (ii) upon written notice to a Participant, that the Participant's Awards will terminate upon or immediately prior to the consummation of such merger or Change in Control; (iii) outstanding Awards will vest and become exercisable, realizable, or payable, or restrictions applicable to an Award will lapse, in whole or in part prior to or upon consummation of such merger or Change in Control, and, to the extent the Administrator determines, terminate upon or immediately prior to the effectiveness of such merger or Change in Control; (iv) (A) the termination of an Award in exchange for an amount of cash and/or property, if any, equal to the amount that would have been attained upon the exercise of such Award or realization of the Participant's rights as of the date of the occurrence of the transaction (and, for the avoidance of doubt, if as of the date of the occurrence of the transaction the Administrator determines in good faith that no amount would have been attained upon the exercise of such Award or realization of the Participant's rights, then such Award may be terminated by the Company without payment), or (B) the replacement of such Award with other rights or property selected by the Administrator in its sole discretion; or (v) any combination of the foregoing. In taking any of the actions permitted under this subsection 13(c), the Administrator will not be obligated to treat all Awards, all Awards held by a Participant, or all Awards of the same type, similarly.

In the event that the successor corporation does not assume or substitute for the Award (or portion thereof), the Participant will fully vest in and have the right to exercise all of his or her outstanding Options and Stock Appreciation Rights, including Shares as to which such Awards would not otherwise be vested or exercisable, all restrictions on Restricted Stock and Restricted Stock Units will lapse, and, with respect to Awards with performance-based vesting, all

performance goals or other vesting criteria will be deemed achieved at one hundred percent (100%) of target levels and all other terms and conditions met. In addition, if an Option or Stock Appreciation Right is not assumed or substituted in the event of a merger or Change in Control, the Administrator will notify the Participant in writing or electronically that the Option or Stock Appreciation Right will be exercisable for a period of time determined by the Administrator in its sole discretion, and the Option or Stock Appreciation Right will terminate upon the expiration of such period.

For the purposes of this subsection 13(c), an Award will be considered assumed if, following the merger or Change in Control, the Award confers the right to purchase or receive, for each Share subject to the Award immediately prior to the merger or Change in Control, the consideration (whether stock, cash, or other securities or property) received in the merger or Change in Control by holders of Common Stock for each Share held on the effective date of the transaction (and if holders were offered a choice of consideration, the type of consideration chosen by the holders of a majority of the outstanding Shares); provided, however, that if such consideration received in the merger or Change in Control is not solely common stock of the successor corporation or its Parent, the Administrator may, with the consent of the successor corporation, provide for the consideration to be received upon the exercise of an Option or Stock Appreciation Right or upon the payout of a Restricted Stock Unit, for each Share subject to such Award, to be solely common stock of the successor corporation or its Parent equal in fair market value to the per share consideration received by holders of Common Stock in the merger or Change in Control.

Notwithstanding anything in this Section 13(c) to the contrary, an Award that vests, is earned or paid-out upon the satisfaction of one or more performance goals will not be considered assumed if the Company or its successor modifies any of such performance goals without the Participant's consent; provided, however, a modification to such performance goals only to reflect the successor corporation's post-Change in Control corporate structure will not be deemed to invalidate an otherwise valid Award assumption.

Notwithstanding anything in this Section 13(c) to the contrary, if a payment under an Award Agreement is subject to Code Section 409A and if the change in control definition contained in the Award Agreement does not comply with the definition of "change of control" for purposes of a distribution under Code Section 409A, then any payment of an amount that is otherwise accelerated under this Section will be delayed until the earliest time that such payment would be permissible under Code Section 409A without triggering any penalties applicable under Code Section 409A.

14. Tax Withholding.

(a) Withholding Requirements. Prior to the delivery of any Shares or cash pursuant to an Award (or exercise thereof), the Company will have the power and the right to deduct or withhold, or require a Participant to remit to the Company, an amount sufficient to satisfy federal, state, local, foreign or other taxes (including the Participant's FICA obligation) required to be withheld with respect to such Award (or exercise thereof).

(b) Withholding Arrangements. The Administrator, in its sole discretion and pursuant to such procedures as it may specify from time to time, may permit a Participant to satisfy such tax withholding obligation, in whole or in part by (without limitation) (i) paying cash, (ii) electing to have the Company withhold otherwise deliverable Shares having a Fair Market Value equal to the minimum statutory amount required to be withheld, (iii) delivering to the Company already-owned Shares having a Fair Market Value equal to the statutory amount required to be withheld, provided the delivery of such Shares will not result in any adverse accounting consequences, as the Administrator determines in its sole discretion, or (iv) selling a sufficient number of Shares otherwise deliverable to the Participant through such means as the Administrator may determine in its sole discretion (whether through a broker or otherwise) equal to the amount required to be withheld. The amount of the withholding requirement will be deemed to include any amount which the Administrator agrees may be withheld at the time the election is made, not to exceed the amount determined by using the maximum federal, state or local marginal income tax rates applicable to the Participant with respect to the Award on the date that the amount of tax to be withheld is to be determined. The Fair Market Value of the Shares to be withheld or delivered will be determined as of the date that the taxes are required to be withheld.

15. No Effect on Employment or Service. Neither the Plan nor any Award will confer upon a Participant any right with respect to continuing the Participant's relationship as a Service Provider with the Company, nor will they interfere in any way with the Participant's right or the Company's right to terminate such relationship at any time, with or without cause, to the extent permitted by Applicable Laws.

16. Date of Grant. The date of grant of an Award will be, for all purposes, the date on which the Administrator makes the determination granting such Award, or such other later date as is determined by the Administrator. Notice of the determination will be provided to each Participant within a reasonable time after the date of such grant.

17. Term of Plan. Subject to Section 21 of the Plan, the Plan will become effective upon its adoption by the Board. Unless sooner terminated under Section 18, it will continue in effect for a term of ten (10) years from the later of (a) the effective date of the Plan, or (b) the earlier of the most recent Board or stockholder approval of an increase in the number of Shares reserved for issuance under the Plan.

18. Amendment and Termination of the Plan.

(a) Amendment and Termination. The Board may at any time amend, alter, suspend or terminate the Plan.

(b) Stockholder Approval. The Company will obtain stockholder approval of any Plan amendment to the extent necessary and desirable to comply with Applicable Laws.

(c) Effect of Amendment or Termination. No amendment, alteration, suspension or termination of the Plan will impair the rights of any Participant, unless mutually agreed otherwise between the Participant and the Administrator, which agreement must be in writing and signed by the Participant and the Company. Termination of the Plan will not affect the Administrator's ability to exercise the powers granted to it hereunder with respect to Awards granted under the Plan prior to the date of such termination.

19. Conditions Upon Issuance of Shares.

(a) Legal Compliance. Shares will not be issued pursuant to the exercise of an Award unless the exercise of such Award and the issuance and delivery of such Shares will comply with Applicable Laws and will be further subject to the approval of counsel for the Company with respect to such compliance.

(b) Investment Representations. As a condition to the exercise of an Award, the Company may require the person exercising such Award to represent and warrant at the time of any such exercise that the Shares are being purchased only for investment and without any present intention to sell or distribute such Shares if, in the opinion of counsel for the Company, such a representation is required.

20. Inability to Obtain Authority. The inability of the Company to obtain authority from any regulatory body having jurisdiction, which authority is deemed by the Company's counsel to be necessary to the lawful issuance and sale of any Shares hereunder, will relieve the Company of any liability in respect of the failure to issue or sell such Shares as to which such requisite authority will not have been obtained.

21. Stockholder Approval. The Plan will be subject to approval by the stockholders of the Company within twelve (12) months after the date the Plan is adopted by the Board. Such stockholder approval will be obtained in the manner and to the degree required under Applicable Laws.

22. Information to Participants. Beginning on the earlier of (a) the date that the aggregate number of Participants under this Plan is two thousand (2,000) or more or the aggregate number of Participants under this Plan who are not accredited investors (as defined in Rule 501(a) of Regulation D promulgate by the Securities and Exchange Committee under the Securities Act) is five hundred (500) or more and (b) the date that the Company is required to deliver information to Participants pursuant to Rule 701 under the Securities Act, and until such time as the Company becomes subject to the reporting requirements of Section 13 or 15(d) of the Exchange Act, is no longer relying on the exemption provided by Rule 12h-1(f)(1) under the Exchange Act or is no longer required to deliver information to Participants pursuant to Rule 701 under the Securities Act, the Company shall provide to each Participant the information described in paragraphs (e)(3), (4), and (5) of Rule 701 under the Securities Act not less frequently than every six (6) months with the financial statements being not more than 180 days old and with such information provided either by physical or electronic delivery to the Participants or by written notice to the Participants of the availability of the information on an Internet site that may be password-protected and of any password needed to access the information. The Company may request that Participants agree to keep the information to be provided pursuant to this section confidential. If a Participant does not agree to keep the information to be provided pursuant to this section confidential, then the Company will not be required to provide the information unless otherwise required pursuant to Rule 12h-1(f)(1) under the Exchange Act or Rule 701 of the Securities Act.

AMENDMENT TO THE
VERRICA PHARMACEUTICALS INC.
2013 EQUITY INCENTIVE PLAN

Effective Date: February 20, 2018

This Amendment to the Verrica Pharmaceuticals Inc. 2013 Equity Incentive Plan (the "Plan") is effective as of the date first set forth above, such amendment having been approved by the Board of Directors of Verrica Pharmaceuticals Inc., a Delaware corporation (the "Company"), on February 12, 2018, and approved by the holders of a majority of the Company's outstanding shares of voting capital stock on February 20, 2018, in each case in accordance with Section 18 of the Plan. Capitalized terms used but not defined herein shall have the meanings provided in the Plan.

As a result of the foregoing approvals, the Plan is hereby amended as follows:

1. Section 3(a) of the Plan is hereby amended and restated to read in its entirety as follows:

"3. Stock Subject to the Plan. Subject to the provisions of Section 13 of the Plan, the maximum aggregate number of Shares that may be subject to Awards and sold under the Plan is 2,639,562 Shares. The Shares may be authorized but unissued, or reacquired Common Stock."

EXHIBIT 10.3

VERRICA PHARMACEUTICALS INC.

2013 EQUITY INCENTIVE PLAN

STOCK OPTION AGREEMENT

Unless otherwise defined herein, the terms defined in the 2013 Equity Incentive Plan (the "Plan") shall have the same defined meanings in this Stock Option Agreement (the "Option Agreement").

I. NOTICE OF STOCK OPTION GRANT

Name:

Address:

The undersigned Participant has been granted an Option to purchase Common Stock of the Company, subject to the terms and conditions of the Plan and this Option Agreement, as follows:

Date of Grant:	_____
Vesting Commencement Date:	_____
Exercise Price per Share:	_____
Total Number of Shares Granted:	_____
Total Exercise Price:	_____
Type of Option:	«ISO» Incentive Stock Option
	«NSO» Nonstatutory Stock Option
Term/Expiration Date:	«Expire_Date»

Vesting Schedule:

This Option shall be exercisable, in whole or in part, according to the following vesting schedule:

Twenty-five percent (25%) of the Shares subject to the Option shall vest on the one (1) year anniversary of the Vesting Commencement Date, and one forty-eighth (1/48th) of the Shares subject to the Option shall vest each month thereafter on the same day of the month as the Vesting Commencement Date (and if there is no corresponding day, on the last day of the month), subject to Participant continuing to be a Service Provider through each such date. Notwithstanding the provisions of Section 13(c) of the Plan (or any successor clause) which provides for the full vesting of any Option if a surviving corporation in a merger or Change in Control does not assume or substitute for such Option (or portion thereof), Participant agrees that, unless the Company in its sole discretion provides otherwise, no accelerated vesting as provided for under Section 13(c) (or any successor clause) will occur automatically if the Option is not assumed or substituted for as part of a merger or Change in Control (but the remaining provisions of Section 13(c) of the Plan will continue to apply).

Termination Period:

(a) This Option shall be exercisable to the extent it is vested for three (3) months after Participant ceases to be a Service Provider, unless such termination is for Cause or due to Participant's death or Disability. If Participant's termination as a Service Provider is due to death or Disability, then the vested portion of the Option shall be exercisable for twelve (12) months after Participant ceases to be a Service Provider. If Participant's termination as a Service Provider is for Cause, then the Option will be forfeited in its entirety, both the vested and unvested portion of the Option, as of such termination date without any payment to Participant and may not thereafter be exercised. Notwithstanding the foregoing, in no event may this Option be exercised after the Term/Expiration Date as provided above and this Option may be subject to earlier termination as provided in Section 13 of the Plan.

(b) For purposes of this Option Agreement, "Cause" will have the meaning ascribed to such term in any written agreement between Participant and the Company defining such term and, in the absence of such agreement, such term means, with respect to Participant, the occurrence of any of the following events: (i) Participant's conviction of any felony or any crime involving fraud or dishonesty; (ii) Participant's participation in a fraud, act of dishonesty or other act of gross misconduct that adversely affects the Company; (iii) conduct by Participant that demonstrates Participant's gross unfitness to serve under circumstances that materially and adversely affect the Company; (iv) Participant's violation of any statutory or fiduciary duty, or duty of loyalty, owed to the Company; (v) Participant's breach of any material term of any contract between Participant and the Company; and/or (vi) Participant's serious violation of a material Company policy. The determination that a termination of the Participant's status as a Service Provider is either for Cause or without Cause will be made by the Company, in its sole discretion. Any determination by the Company that such termination is with or without Cause for the purposes of this Option will have no effect upon any determination of the rights or obligations of the Company or such Participant for any other purpose.

II. AGREEMENT

1. Grant of Option. The Administrator of the Company hereby grants to the Participant named in the Notice of Stock Option Grant in Part I of this Option Agreement ("Participant"), an option (the "Option") to purchase the number of Shares set forth in the Notice of Stock Option Grant, at the exercise price per Share set forth in the Notice of Stock Option Grant (the "Exercise Price"), and subject to the terms and conditions of the Plan, which is incorporated herein by reference. Subject to Section 18 of the Plan, in the event of a conflict between the terms and conditions of the Plan and this Option Agreement, the terms and conditions of the Plan shall prevail.

If designated in the Notice of Stock Option Grant as an Incentive Stock Option ("ISO"), this Option is intended to qualify as an Incentive Stock Option as defined in Section 422 of the Code. Nevertheless, to the extent that it exceeds the $100,000 rule of Code Section 422(d), this Option shall be treated as a Nonstatutory Stock Option ("NSO"). Further, if for any reason this Option (or portion thereof) shall not qualify as an ISO, then, to the extent of such nonqualification, such Option (or portion thereof) shall be regarded as a NSO granted under the Plan. In no event shall the Administrator, the Company or any Parent or Subsidiary or any of their respective employees or directors have any liability to Participant (or any other person) due to the failure of the Option to qualify for any reason as an ISO.

2. Exercise of Option.

(a) Right to Exercise. This Option shall be exercisable during its term in accordance with the Vesting Schedule set out in the Notice of Stock Option Grant and with the applicable provisions of the Plan and this Option Agreement.

(b) Method of Exercise. This Option shall be exercisable by delivery of an exercise notice in the form attached as Exhibit A (the "Exercise Notice") or in a manner and pursuant to such procedures as the Administrator may determine, which shall state the election to exercise the Option, the number of Shares with respect to which the Option is being exercised (the "Exercised Shares"), and such other representations and agreements as may be required by the Company. The Exercise Notice shall be accompanied by payment of the aggregate Exercise Price as to all Exercised Shares, together with any applicable tax withholding. This Option shall be deemed to be exercised upon receipt by the Company of such fully executed Exercise Notice accompanied by the aggregate Exercise Price, together with any applicable tax withholding.

No Shares shall be issued pursuant to the exercise of an Option unless such issuance and such exercise comply with Applicable Laws. Assuming such compliance, for income tax purposes the Shares shall be considered transferred to Participant on the date on which the Option is exercised with respect to such Shares.

3. Participant's Representations. In the event the Shares have not been registered under the Securities Act of 1933, as amended (the "Securities Act"), at the time this Option is exercised, Participant shall, if required by the Company, concurrently with the exercise of all or any portion of this Option, deliver to the Company his or her Investment Representation Statement in the form attached hereto as Exhibit B.

4. Lock-Up Period. Participant hereby agrees that Participant shall not offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any Common Stock (or other securities) of the Company or enter into any swap, hedging or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of any Common Stock (or other securities) of the Company held by Participant (other than those included in the registration) for a period specified by the representative of the underwriters of Common Stock (or other securities) of the Company not to exceed one hundred and eighty (180) days following the effective date of any registration statement of the Company filed under the Securities Act (or such other period as may be requested by the Company or the underwriters to accommodate regulatory restrictions on (i) the publication or other distribution of research reports and (ii) analyst recommendations and opinions, including, but not limited to, the restrictions contained in NASD Rule 2711(f)(4) or NYSE Rule 472(f)(4), or any successor provisions or amendments thereto).

Participant agrees to execute and deliver such other agreements as may be reasonably requested by the Company or the underwriter which are consistent with the foregoing or which are necessary to give further effect thereto. In addition, if requested by the Company or the representative of the underwriters of Common Stock (or other securities) of the Company, Participant shall provide, within ten (10) days of such request, such information as may be required by the Company or such representative in connection with the completion of any public offering of the Company's securities pursuant to a registration statement filed under the Securities Act. The obligations described in this Section 4 shall not apply to a registration relating solely to employee benefit plans on Form S-1 or Form S-8 or similar forms that may be promulgated in the future, or a registration relating solely to a Commission Rule 145 transaction on Form S-4 or similar forms that may be promulgated in the future. The Company may impose stop-transfer instructions with respect to the shares of Common Stock (or other securities) subject to the foregoing restriction until the end of said one hundred and eighty (180) day (or other) period. Participant agrees that any transferee of the Option or shares acquired pursuant to the Option shall be bound by this Section 4.

5. Method of Payment. Payment of the aggregate Exercise Price shall be by any of the following, or a combination thereof, at the election of the Participant:

(a) cash;

(b) check;

(c) consideration received by the Company under a formal cashless exercise program adopted by the Company in connection with the Plan; or

(d) surrender of other Shares which (i) shall be valued at its Fair Market Value on the date of exercise, and (ii) must be owned free and clear of any liens, claims, encumbrances or security interests, if accepting such Shares, in the sole discretion of the Administrator, shall not result in any adverse accounting consequences to the Company.

6. Restrictions on Exercise. This Option may not be exercised until such time as the Plan has been approved by the stockholders of the Company, or if the issuance of such Shares upon such exercise or the method of payment of consideration for such shares would constitute a violation of any Applicable Law.

7. Non-Transferability of Option.

(a) This Option may not be transferred in any manner otherwise than by will or by the laws of descent or distribution and may be exercised during the lifetime of Participant only by Participant. The terms of the Plan and this Option Agreement shall be binding upon the executors, administrators, heirs, successors and assigns of Participant.

(b) Further, until the Company becomes subject to the reporting requirements of Section 13 or 15(d) of the Exchange Act, or after the Administrator determines that it is, will, or may no longer be relying upon the exemption from registration of Options under the Exchange Act as set forth in Rule 12h-1(f) promulgated under the Exchange Act (the "Reliance End Date"), Participant shall not transfer this Option or, prior to exercise, the Shares subject to this Option, in any manner other than (i) to persons who are "family members" (as defined in Rule 701(c)(3) of the Securities Act) through gifts or domestic relations orders, or (ii) to an executor or guardian of Participant upon the death or disability of Participant. Until the Reliance End Date, the Options and, prior to exercise, the Shares subject to this Option, may not be pledged, hypothecated or otherwise transferred or disposed of, including by entering into any short position, any "put equivalent position" or any "call equivalent position" (as defined in Rule 16a-1(h) and Rule 16a-1(b) of the Exchange Act, respectively), other than as permitted in clauses (i) and (ii) of this paragraph.

8. Term of Option. This Option may be exercised only within the term set out in the Notice of Stock Option Grant, and may be exercised during such term only in accordance with the Plan and the terms of this Option Agreement.

9. Tax Obligations.

(a) Tax Withholding. Participant agrees to make appropriate arrangements with the Company (or the Parent or Subsidiary employing or retaining Participant) for the satisfaction of all Federal, state, local and foreign income and employment tax withholding requirements applicable to the Option exercise. Participant acknowledges and agrees that the Company may refuse to honor the exercise and refuse to deliver the Shares if such withholding amounts are not delivered at the time of exercise.

(b) Notice of Disqualifying Disposition of ISO Shares. If the Option granted to Participant herein is an ISO, and if Participant sells or otherwise disposes of any of the Shares acquired pursuant to the ISO on or before the later of (i) the date two (2) years after the Date of Grant, or (ii) the date one (1) year after the date of exercise, Participant shall immediately notify the Company in writing of such disposition. Participant agrees that Participant may be subject to income tax withholding by the Company on the compensation income recognized by Participant.

(c) Code Section 409A. Under Code Section 409A, an Option that vests after December 31, 2004 (or that vested on or prior to such date but which was materially modified after October 3, 2004) that was granted with a per Share exercise price that is determined by the Internal Revenue Service (the "IRS") to be less than the Fair Market Value of a Share on the date of grant (a "discount option") may be considered "deferred compensation." An Option that is a "discount option" may result in (i) income recognition by Participant prior to the exercise of the Option, (ii) an additional twenty percent (20%) federal income tax, and (iii) potential penalty and interest charges. The "discount option" may also result in additional state income, penalty and interest tax to the Participant. Participant acknowledges that the Company cannot and has not guaranteed that the IRS will agree that the per Share exercise price of this Option equals or exceeds the Fair Market Value of a Share on the date of grant in a later examination. Participant agrees that if the IRS determines that the Option was granted with a per Share exercise price that was less than the Fair Market Value of a Share on the date of grant, Participant shall be solely responsible for Participant's costs related to such a determination.

10. Call Right Upon Terminating Event.

(a) Notwithstanding any provision to the contrary contained in the Plan or this Option Agreement, and in addition to any restrictions imposed by the Plan, all Shares purchased pursuant to this Option shall be subject to the terms and conditions of this Section 10.

(b) In the event of the termination of Participant ceases to be a Service Provider for any reason, with or without cause, or in the event any Shares purchased pursuant to Participant's Option have been finally determined by a court to have vested in, a receiver, bankruptcy trustee, creditor, creditor's committee, adverse party in a divorce, separation or equitable distribution proceeding (each, a "Terminating Event"), then effective immediately upon such Terminating Event, Participant shall automatically be deemed to have offered for sale and redemption by the Company all of Participant's Shares purchased pursuant to Participant's Option for the purchase price and pursuant to the terms contained in this Section 10. As used herein, the "Termination Date" shall mean the date of the Terminating Event.

(c) At any time after the Termination Date, the Company shall have the right and option in its sole and absolute discretion, but no obligation, to accept the deemed offer with respect to all or any portion of Participant's Shares purchased pursuant to Participant's Option by sending written notice to Participant indicating such acceptance, specifying the number of Shares to be purchased and redeemed hereunder, and scheduling a closing for the purchase and redemption within thirty (30) days after such written notice. The closing of any purchase and redemption under this Section 10 shall take place at the principal offices of the Company or such other location as may be designated by the Company in its written notice of acceptance.

(d) The purchase price ("Call Price") for Participant's Shares for purposes of this Section 10 shall be equal to the Fair Market Value of the Shares as of the date on which the Company exercises its option to acquire such Shares. The Call Price as so determined shall be reduced by any amounts owed by Participant to the Company as of the closing date and the amount of any claim by the Company for damages, costs, liability and expenses incurred by the Company and relating to any act or omission by Participant which would constitute a material violation by Participant, whether before or after a Terminating Event, of any provision of any agreement between Participant and the Company. The Company shall have the option of making payment of the Call Price at closing in any combination of (a) cash and/or (b) by the Company's execution and delivery of a promissory note of the Company bearing interest at an annual rate of five percent (5%) per annum and payable in not more than twenty (20) equal quarterly installments of principal and interest, with the first quarterly installment being due and payable on the first (1st) day of the first full calendar quarter following the closing date.

11. Entire Agreement; Governing Law. The Plan is incorporated herein by reference. The Plan and this Option Agreement constitute the entire agreement of the parties with respect to the subject matter hereof and supersede in their entirety all prior undertakings and agreements of the Company and Participant with respect to the subject matter hereof, and may not be modified adversely to the Participant's interest except by means of a writing signed by the Company and Participant. This Option Agreement is governed by the internal substantive laws but not the choice of law rules of Delaware.

12. No Guarantee of Continued Service. PARTICIPANT ACKNOWLEDGES AND AGREES THAT THE VESTING OF SHARES PURSUANT TO THE VESTING SCHEDULE HEREOF IS EARNED ONLY BY CONTINUING AS A SERVICE PROVIDER AT THE WILL OF THE COMPANY (OR THE PARENT OR SUBSIDIARY EMPLOYING OR RETAINING PARTICIPANT) AND NOT THROUGH THE ACT OF BEING HIRED, BEING GRANTED THIS OPTION OR ACQUIRING SHARES HEREUNDER. PARTICIPANT FURTHER ACKNOWLEDGES AND AGREES THAT THIS AGREEMENT, THE TRANSACTIONS CONTEMPLATED HEREUNDER AND THE VESTING SCHEDULE SET FORTH HEREIN DO NOT CONSTITUTE AN EXPRESS OR IMPLIED PROMISE OF CONTINUED ENGAGEMENT AS A SERVICE PROVIDER FOR THE VESTING PERIOD, FOR ANY PERIOD, OR AT ALL, AND SHALL NOT INTERFERE IN ANY WAY WITH PARTICIPANT'S RIGHT OR THE RIGHT OF THE COMPANY (OR THE PARENT OR SUBSIDIARY EMPLOYING OR RETAINING PARTICIPANT) TO TERMINATE PARTICIPANT'S RELATIONSHIP AS A SERVICE PROVIDER AT ANY TIME, WITH OR WITHOUT CAUSE.

Participant acknowledges receipt of a copy of the Plan and represents that he or she is familiar with the terms and provisions thereof, and hereby accepts this Option subject to all of the terms and provisions thereof. Participant has reviewed the Plan and this Option in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Option and fully understands all provisions of the Option. Participant hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Administrator upon any questions arising under the Plan or this Option. Participant further agrees to notify the Company upon any change in the residence address indicated below.

PARTICIPANT	VERRICA PHARMACEUTICALS INC.
_____	_____
Signature	By
«Name»	_____
Print Name	Print Name
«Address»	_____
	Title
«City_State_Zip»	
Residence Address	

EXHIBIT A

2013 EQUITY INCENTIVE PLAN

EXERCISE NOTICE

Verrica Pharmaceuticals Inc.
200 Garrett Street, Suite S
Charlottesville, VA 22902

Attention: President

1. Exercise of Option. Effective as of today, , , the undersigned ("Participant") hereby elects to exercise Participant's option (the "Option") to purchase shares of the Common Stock (the "Shares") of Verrica Pharmaceuticals Inc. (the "Company") under and pursuant to the 2013 Equity Incentive Plan (the "Plan") and the Stock Option Agreement dated , (the "Option Agreement").

2. Delivery of Payment. Participant herewith delivers to the Company the full purchase price of the Shares, as set forth in the Option Agreement, and any and all withholding taxes due in connection with the exercise of the Option.

3. Representations of Participant. Participant acknowledges that Participant has received, read and understood the Plan and the Option Agreement and agrees to abide by and be bound by their terms and conditions.

4. Rights as Stockholder. Until the issuance of the Shares (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), no right to vote or receive dividends or any other rights as a stockholder shall exist with respect to the Common Stock subject to an Award, notwithstanding the exercise of the Option. The Shares shall be issued to Participant as soon as practicable after the Option is exercised in accordance with the Option Agreement. No adjustment shall be made for a dividend or other right for which the record date is prior to the date of issuance except as provided in Section 13 of the Plan.

5. Company's Right of First Refusal. Before any Shares held by Participant or any transferee (either being sometimes referred to herein as the "Holder") may be sold or otherwise transferred (including transfer by gift or operation of law), the Company or its assignee(s) shall have a right of first refusal to purchase the Shares on the terms and conditions set forth in this Section 5 (the "Right of First Refusal").

(a) Notice of Proposed Transfer. The Holder of the Shares shall deliver to the Company a written notice (the "Notice") stating: (i) the Holder's bona fide intention to sell or otherwise transfer such Shares; (ii) the name of each proposed purchaser or other transferee ("Proposed Transferee"); (iii) the number of Shares to be transferred to each Proposed Transferee; and (iv) the bona fide cash price or other consideration for which the Holder proposes to transfer the Shares (the "Offered Price"), and the Holder shall offer the Shares at the Offered Price to the Company or its assignee(s).

(b) Exercise of Right of First Refusal. At any time within thirty (30) days after receipt of the Notice, the Company and/or its assignee(s) may, by giving written notice to the Holder, elect to purchase all, but not less than all, of the Shares proposed to be transferred to any one or more of the Proposed Transferees, at the purchase price determined in accordance with subsection (c) below.

(c) Purchase Price. The purchase price ("Purchase Price") for the Shares purchased by the Company or its assignee(s) under this Section 5 shall be the Offered Price. If the Offered Price includes consideration other than cash, the cash equivalent value of the non-cash consideration shall be determined by the Board of Directors of the Company in good faith.

(d) Payment. Payment of the Purchase Price shall be made, at the option of the Company or its assignee(s), in cash (by check), by cancellation of all or a portion of any outstanding indebtedness of the Holder to the Company (or, in the case of repurchase by an assignee, to the assignee), or by any combination thereof within thirty (30) days after receipt of the Notice or in the manner and at the times set forth in the Notice.

(e) Holder's Right to Transfer. If all of the Shares proposed in the Notice to be transferred to a given Proposed Transferee are not purchased by the Company and/or its assignee(s) as provided in this Section 5, then (subject to any restrictions on transfer set forth in the Plan or the Option Agreement) the Holder may sell or otherwise transfer such Shares to that Proposed Transferee at the Offered Price or at a higher price, *provided* that such sale or other transfer is consummated within one hundred and twenty (120) days after the date of the Notice, that any such sale or other transfer is effected in accordance with any applicable securities laws and that the Proposed Transferee agrees in writing that the provisions of the Plan, the Option Agreement and this Section 5 shall continue to apply to the Shares in the hands of such Proposed Transferee. If the Shares described in the Notice are not transferred to the Proposed Transferee within such period, a new Notice shall be given to the Company, and the Company and/or its assignees shall again be offered the Right of First Refusal before any Shares held by the Holder may be sold or otherwise transferred.

(f) Exception for Certain Family Transfers. Anything to the contrary contained in this Section 5 notwithstanding, the transfer of any or all of the Shares during the Participant's lifetime or on the Participant's death by will or intestacy to the Participant's immediate family or a trust for the benefit of the Participant's immediate family shall be exempt from the provisions of this Section 5. "Immediate Family" as used herein shall mean spouse, lineal descendant or antecedent, father, mother, brother or sister. In such case, the transferee or other recipient shall receive and hold the Shares so transferred subject to the provisions of this Section 5, and there shall be no further transfer of such Shares except in accordance with the terms of this Section 5.

(g) Termination of Right of First Refusal. The Right of First Refusal shall terminate as to any Shares upon the earlier of (i) the first sale of Common Stock of the Company to the general public, or (ii) a Change in Control in which the successor corporation has equity securities that are publicly traded.

6. Tax Consultation. Participant understands that Participant may suffer adverse tax consequences as a result of Participant's purchase or disposition of the Shares. Participant represents that Participant has consulted with any tax consultants Participant deems advisable in connection with the purchase or disposition of the Shares and that Participant is not relying on the Company for any tax advice.

7. Restrictive Legends and Stop-Transfer Orders.

(a) Legends. Participant understands and agrees that the Company shall cause the legends set forth below or legends substantially equivalent thereto, to be placed upon any certificate(s) evidencing ownership of the Shares together with any other legends that may be required by the Company or by state or federal securities laws:

THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933 (THE "ACT") AND MAY NOT BE OFFERED, SOLD OR OTHERWISE TRANSFERRED, PLEDGED OR HYPOTHECATED UNLESS AND UNTIL REGISTERED UNDER THE ACT OR, IN THE OPINION OF COUNSEL SATISFACTORY TO THE ISSUER OF THESE SECURITIES, SUCH OFFER, SALE OR TRANSFER, PLEDGE OR HYPOTHECATION IS IN COMPLIANCE THEREWITH.

THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO CERTAIN RESTRICTIONS ON TRANSFER, A CALL RIGHT, A RIGHT OF FIRST REFUSAL HELD BY THE ISSUER OR ITS ASSIGNEE(S) AND CERTAIN OTHER RIGHTS AND RESTRICTIONS AS SET FORTH IN THE PLAN, THE OPTION AGREEMENT AND EXERCISE NOTICE BETWEEN THE ISSUER AND THE ORIGINAL HOLDER OF THESE SHARES, A COPY OF WHICH MAY BE OBTAINED AT THE PRINCIPAL OFFICE OF THE ISSUER. SUCH TRANSFER RESTRICTIONS, CALL RIGHT, RIGHT OF FIRST REFUSAL AND OTHER RIGHTS AND RESTRICTIONS ARE BINDING ON TRANSFEREES OF THESE SHARES.

THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO RESTRICTIONS ON TRANSFER FOR A PERIOD OF TIME FOLLOWING THE EFFECTIVE DATE OF THE UNDERWRITTEN PUBLIC OFFERING OF THE COMPANY'S SECURITIES SET FORTH IN AN AGREEMENT BETWEEN THE ISSUER AND THE ORIGINAL HOLDER OF THESE SHARES AND MAY NOT BE SOLD OR OTHERWISE DISPOSED OF BY THE HOLDER PRIOR TO THE EXPIRATION OF SUCH PERIOD WITHOUT THE CONSENT OF THE COMPANY OR THE MANAGING UNDERWRITER.

(b) Stop-Transfer Notices. Participant agrees that, in order to ensure compliance with the restrictions referred to herein, the Company may issue appropriate "stop transfer" instructions to its transfer agent, if any, and that, if the Company transfers its own securities, it may make appropriate notations to the same effect in its own records.

(c) Refusal to Transfer. The Company shall not be required (i) to transfer on its books any Shares that have been sold or otherwise transferred in violation of any of the provisions of this Exercise Notice or (ii) to treat as owner of such Shares or to accord the right to vote or pay dividends to any purchaser or other transferee to whom such Shares shall have been so transferred.

8. Successors and Assigns. The Company may assign any of its rights under this Exercise Notice to single or multiple assignees, and this Exercise Notice shall inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer herein set forth, this Exercise Notice shall be binding upon Participant and his or her heirs, executors, administrators, successors and assigns.

9. Interpretation. Any dispute regarding the interpretation of this Exercise Notice shall be submitted by Participant or by the Company forthwith to the Administrator, which shall review such dispute at its next regular meeting. The resolution of such a dispute by the Administrator shall be final and binding on all parties.

10. Governing Law; Severability. This Exercise Notice is governed by the internal substantive laws, but not the choice of law rules, of Delaware. In the event that any provision hereof becomes or is declared by a court of competent jurisdiction to be illegal, unenforceable or void, this Exercise Notice shall continue in full force and effect.

11. Entire Agreement. The Plan and Option Agreement are incorporated herein by reference. This Exercise Notice, the Plan, the Option Agreement and the Investment Representation Statement constitute the entire agreement of the parties with respect to the subject matter hereof and supersede in their entirety all prior undertakings and agreements of the Company and Participant with respect to the subject matter hereof, and may not be modified adversely to the Participant's interest except by means of a writing signed by the Company and Participant.

Submitted by:	Accepted by:
PARTICIPANT	VERRICA PHARMACEUTICALS INC.
_____	_____
Signature	By
«Name»	_____
Print Name	Print Name
	_____
	Title
Address:	
	Address:
«Address»	
«City_State_Zip»	_____
	Date Received

EXHIBIT B

INVESTMENT REPRESENTATION STATEMENT

PARTICIPANT	:	«Name»
COMPANY	:	VERRICA PHARMACEUTICALS INC.
SECURITY	:	COMMON STOCK
AMOUNT	:	«Shares»
DATE	:	

In connection with the purchase of the above-listed Securities, the undersigned Participant represents to the Company the following:

(a) Participant is aware of the Company's business affairs and financial condition and has acquired sufficient information about the Company to reach an informed and knowledgeable decision to acquire the Securities. Participant is acquiring these Securities for investment for Participant's own account only and not with a view to, or for resale in connection with, any "distribution" thereof within the meaning of the Securities Act of 1933, as amended (the "Securities Act").

(b) Participant acknowledges and understands that the Securities constitute "restricted securities" under the Securities Act and have not been registered under the Securities Act in reliance upon a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of Participant's investment intent as expressed herein. In this connection, Participant understands that, in the view of the Securities and Exchange Commission, the statutory basis for such exemption may be unavailable if Participant's representation was predicated solely upon a present intention to hold these Securities for the minimum capital gains period specified under tax statutes, for a deferred sale, for or until an increase or decrease in the market price of the Securities, or for a period of one (1) year or any other fixed period in the future. Participant further understands that the Securities must be held indefinitely unless they are subsequently registered under the Securities Act or an exemption from such registration is available. Participant further acknowledges and understands that the Company is under no obligation to register the Securities. Participant understands that the certificate evidencing the Securities shall be imprinted with any legend required under applicable state securities laws.

(c) Participant is familiar with the provisions of Rule 701 and Rule 144, each promulgated under the Securities Act, which, in substance, permit limited public resale of "restricted securities" acquired, directly or indirectly from the issuer thereof, in a non-public offering subject to the satisfaction of certain conditions. Rule 701 provides that if the issuer qualifies under Rule 701 at the time of the grant of the Option to Participant, the exercise shall be exempt from registration under the Securities Act. In the event the Company becomes subject to the reporting requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, ninety (90) days thereafter (or such

longer period as any market stand-off agreement may require) the Securities exempt under Rule 701 may be resold, subject to the satisfaction of the applicable conditions specified by Rule 144, including in the case of affiliates (1) the availability of certain public information about the Company, (2) the amount of Securities being sold during any three (3) month period not exceeding specified limitations, (3) the resale being made in an unsolicited "broker's transaction", transactions directly with a "market maker" or "riskless principal transactions" (as those terms are defined under the Securities Exchange Act of 1934) and (4) the timely filing of a Form 144, if applicable.

In the event that the Company does not qualify under Rule 701 at the time of grant of the Option, then the Securities may be resold in certain limited circumstances subject to the provisions of Rule 144, which may require (i) the availability of current public information about the Company; (ii) the resale to occur more than a specified period after the purchase and full payment (within the meaning of Rule 144) for the Securities; and (iii) in the case of the sale of Securities by an affiliate, the satisfaction of the conditions set forth in sections (2), (3) and (4) of the paragraph immediately above.

(d) Participant further understands that in the event all of the applicable requirements of Rule 701 or 144 are not satisfied, registration under the Securities Act, compliance with Regulation A, or some other registration exemption shall be required; and that, notwithstanding the fact that Rules 144 and 701 are not exclusive, the Staff of the Securities and Exchange Commission has expressed its opinion that persons proposing to sell private placement securities other than in a registered offering and otherwise than pursuant to Rules 144 or 701 shall have a substantial burden of proof in establishing that an exemption from registration is available for such offers or sales, and that such persons and their respective brokers who participate in such transactions do so at their own risk. Participant understands that no assurances can be given that any such other registration exemption shall be available in such event.

PARTICIPANT

_____

Signature

«Name»

Print Name

_____

Date

EXHIBIT 10.7

EMPLOYMENT AGREEMENT

This **EMPLOYMENT AGREEMENT** (the "***Agreement***") is entered into effective December 11, 2017 (the "***Effective Date***"), by and between Verrica Pharmaceuticals Inc., a Delaware corporation (the "***Company***") and Ted White (the "***Employee***").

The Company desires to employ the Employee in the capacity of full-time CEO pursuant to the terms of this Agreement and, in connection therewith, to compensate the Employee for Employee's personal services to the Company; and

The Employee wishes to be employed by the Company and provide personal services to the Company in return for certain compensation.

Accordingly, in consideration of the mutual promises and covenants contained herein, the parties agree to the following:

1. EMPLOYMENT BY THE COMPANY.

1.1 At-Will Employment. Employee shall be employed by the Company on an "at-will" basis, meaning either the Company or Employee may terminate Employee's employment at any time, with or without cause or advanced notice. Any contrary representations that may have been made to Employee shall be superseded by this Agreement. This Agreement shall constitute the full and complete agreement between Employee and the Company on the "at-will" nature of Employee's employment with the Company, which may be changed only in an express written agreement signed by Employee and a duly authorized officer of the Company. Employee's rights to any compensation following a termination shall be only as set forth in Section 6.

1.2 Position. Subject to the terms set forth herein, the Company agrees to employ Employee, initially, in the position of President and CEO and Employee hereby accepts such employment. During the term of Employee's employment with the Company, Employee will devote Employee's best efforts and substantially all of Employee's business time and attention to the business of the Company.

1.3 Duties. Employee will report to the Board of Directors ("***Board***") of the Company, performing such duties as are normally associated with his position and such duties as are assigned to him from time to time, subject to the oversight and direction of the Board. Employee shall perform his duties under this Agreement principally out of the Company's corporate headquarters to be established within twenty-five (25) miles of West Chester, Pennsylvania or such other location as assigned. In addition, the Employee shall make such business trips to such places as may be necessary or advisable for the efficient operations of the Company.

1.4 Company Policies and Benefits. The employment relationship between the parties shall also be subject to the Company's personnel policies and procedures as they may be interpreted, adopted, revised or deleted from time to time in the Company's sole discretion. The Employee will be eligible to participate on the same basis as similarly situated employees in the Company's benefit plans in effect from time to time during his employment. All matters of eligibility for coverage or benefits under any benefit plan shall be determined in accordance with the provisions of such plan. The Company reserves the right to change, alter, or terminate any benefit plan in its sole discretion. Notwithstanding the foregoing, in the event that the terms of this Agreement differ from or are in conflict with the Company's general employment policies or practices, this Agreement shall control.

1.5 Paid Time Off. The Employee will be eligible for up to fifteen (15) days of paid time off per calendar year in accordance with any paid leave policy adopted by the Company from time to time.

2. COMPENSATION.

2.1 Salary. Employee shall receive for Employee's services to be rendered hereunder an initial annualized base salary of $400,000 per year, subject to review and adjustment from time to time by the Company in its sole discretion, payable subject to standard federal and state payroll withholding requirements in accordance with Company's standard payroll practices ("***Base Salary***").

2.2 Bonus.

(a) **During Employment**. Employee shall be eligible to earn an annual performance bonus of up to 45% of his Base Salary ("***Annual Bonus***"). The Annual Bonus will be based upon the Board's assessment of the Employee's performance and the Company's attainment of targeted goals as set by the Board in its sole discretion. The Annual Bonus, if any, will be subject to applicable payroll deductions and withholdings. Following the close of each calendar year, the Board will determine whether the Employee has earned the Annual Bonus, and the amount of any Annual Bonus, based on the set criteria. No amount of the Annual Bonus is guaranteed, and the Employee must be an employee in good standing on the Annual Bonus payment date to be eligible to receive an Annual Bonus; no partial or prorated bonuses will be provided. The Annual Bonus, if earned, will be paid no later than March 15 of the calendar year immediately following the applicable calendar year for which the Annual Bonus is being measured. The Employee's eligibility for an Annual Bonus is subject to change in the discretion of the Board (or any authorized committee thereof).

(b) **Upon Termination**. In the event Employee leaves the employ of the Company for any reason prior to payment of any bonus, he is not eligible for such bonus, prorated or otherwise.

2.3 Stock Option.

(a) **Option Grant**. Subject to approval of the Board, which the Company agrees to use its best efforts to secure, Employee will be issued options to purchase 1,241,476 shares of the Company's common stock (subject to adjustment for stock splits, dividends and combinations and similar events as will be set forth in the option agreement), with a 10-year term, pursuant and subject to the Company's 2013 Equity Incentive Plan ("***Plan***") and the Company's standard form of Stock Option Agreement ("***Stock Agreement***') between the

Employee and the Company. The option shall be an incentive stock option to the extent permissible under Section 422 of the Internal Revenue Code and will have an exercise price per share equal to the fair market value of a share of the Company's common stock, to be determined in accordance with Section 409A.

(b) **Vesting**. The Option shall vest over a period of four years as follows: (i) 25% of the total shares subject to the Option shall vest on December 11, 2018, and (ii) 1/48th of total shares subject to the Option shall vest monthly thereafter over the remaining three years of the vesting period, subject to Employee's continuous service as of each applicable date. The foregoing notwithstanding, in the event of a Sale Event (as defined below), subject to Employee's continuous service as of the closing of such Sale Event, all of Employee's then-unvested Option shall immediately and automatically vest as of the Closing of such Sale Event. For purposes hereof, "***Sale Event***" shall mean the date on which the Company enters into a binding agreement pursuant to which: (A) any person, including a "group" as defined below, will acquire ownership of all or substantially all of the Company's equity, excluding any acquisition of stock by a person or group of persons who were members or shareholders of such company immediately prior to such acquisition; or (B) any person, including a "group" as defined below, will acquire all or substantially all of the assets of the Company. For purposes of this definition, the term "group" shall have the same meaning as in Section 13(d)(3) of the Securities Exchange Act of 1934. None of the following shall constitute a Sale Event for purposes of this Agreement: (x) the sale of stock of the Company or any successor in an initial public offering, (y) any restructuring, merger or conversion of the Company to a corporation or to an entity organized under the laws of any jurisdiction other than the jurisdiction of the applicable company's organization, whether by merger, conversion, consolidation, contribution of shares or assets, or otherwise, and where members immediately before such restructuring, merger or conversion own any of the capital and voting interests of the resulting or surviving corporation or entity, or (z) any transaction or series of transactions principally for bona fide equity financing purposes in which cash is received by the Company or any successor or indebtedness of the Company is cancelled or converted or a combination thereof. Furthermore, and notwithstanding anything herein to the contrary, an event which does not constitute a change in the ownership, a change in the effective control, or a change in the ownership of a substantial portion of the assets of the Company, each as defined in Section 1.409A-3(i)(5) of the Treasury Regulations (Title 26 of the Code of Federal Regulations, as amended from time to time), shall not constitute a Sale Event for purposes of this Agreement.

2.4 Expense Reimbursement. The Company will reimburse Employee for all reasonable, documented business expenses incurred in connection with his services hereunder, in accordance with the Company's business expense reimbursement policies and procedures as may be in effect from time to time.

3. PROPRIETARY INFORMATION, INVENTIONS, NON-COMPETITION AND NON-SOLICITATION OBLIGATIONS. The parties hereto have entered into a **Proprietary Information, Inventions, Non-Competition and Non-Solicitation Agreement** (the "***Proprietary Information Agreement***"), which may be amended by the parties from time to time without regard to this Agreement. The Proprietary Information Agreement contains provisions that are intended by the parties to survive and do survive termination or expiration of this Agreement.

4. OUTSIDE ACTIVITIES. Except with the prior written consent of the Company's Board, Employee will not, while employed by the Company, undertake or engage in any other employment, occupation or business enterprise that would interfere with Employee's responsibilities and the performance of Employee's duties hereunder except for (i) reasonable time devoted to volunteer services for or on behalf of such religious, educational, non-profit and/or other charitable organization as Employee may wish to serve; (ii) reasonable time devoted to activities in the non-profit and business communities consistent with Employee's duties; (iii) reasonable time devoted to service on boards of directors of companies that are not competitive with the Company, do not otherwise present a conflict of interest and would not otherwise interfere with Employee's responsibilities and the performance of Employee's duties hereunder, subject to the prior written approval of the Board (which approval shall not be unreasonably withheld); and (iv) such other activities that would not interfere with Employee's responsibilities and the performance of Employee's duties hereunder as may be specifically approved by the Board (which approval shall not be unreasonably withheld). This restriction shall not, however, preclude the Employee from owning less than one percent (1%) of the total outstanding shares of a publicly traded company.

5. NO CONFLICT WITH EXISTING OBLIGATIONS. Employee represents that Employee's performance of all the terms of this Agreement and as an Employee of the Company do not and will not breach any agreement or obligation of any kind made prior to Employee's employment by the Company, including agreements or obligations Employee may have with prior employers or entities for which Employee has provided services. Employee has not entered into, and Employee agrees that Employee will not enter into, any agreement or obligation, either written or oral, in conflict herewith.

6. TERMINATION OF EMPLOYMENT. The parties acknowledge that Employee's employment relationship with the Company is at-will. Either Employee or the Company may terminate the employment relationship at any time, with or without Cause. The provisions in this Section govern the amount of compensation, if any, to be provided to Employee upon termination of employment and do not alter this at-will status.

6.1 Termination by the Company Without Cause.

(a) The Company shall have the right to terminate Employee's employment with the Company pursuant to this Section 6.1 at any time without "Cause" (as defined in Section 6.2(a) below) by giving notice as described in Section 6.6 of this Agreement. A termination pursuant to Section 6.5 below is not a termination without "Cause" for purposes of receiving the benefits described in this Section 6.1.

(b) In the event Employee's employment is terminated without Cause, then provided that the Employee executes and does not revoke a separation agreement that includes a general release substantially in the form attached hereto as **Exhibit A** (the "***Release***"), and subject to Section 6.1(c) (the date that the Release becomes effective and may no longer be revoked by the Employee is referred to as the "***Release Date***"), then:

(i) the Company shall pay to Employee an amount equal to Employee's then current Base Salary for the Severance Period (as defined below), less applicable withholdings and deductions (the "***Severance Payment***"), in installments in accordance with the Company's ordinary payroll practices commencing on the Company's first regular payroll date that is more than sixty (60) days following the Separation Date (as defined below), and shall be for any accrued Base Salary for the sixty (60) day period plus the period from the sixtieth (60^{th}) day until the regular payroll date, if applicable, and all salary continuation payments thereafter, if any, shall be made on the Company's regular payroll dates; and

(ii) if the Employee timely elects continued coverage under COBRA for himself and his covered dependents under the Company's group health plans following such termination, then the Employee will be entitled to the following COBRA benefits (the "***COBRA Benefits***," together with the Severance Payment, the "***Severance Benefits***")**:** the Company shall pay the COBRA premiums necessary to continue the Employee's and his covered dependents' health insurance coverage in effect for himself (and his covered dependents) on the termination date until the earliest of (x) a number of months following the termination date equal to the Severance Period (the "***COBRA Severance Period***"); (y) the date when the Employee becomes eligible for health insurance coverage in connection with new employment or self-employment; or (iii) the date the Employee ceases to be eligible for COBRA continuation coverage for any reason, including plan termination (such period from the termination date through the earlier of (i)-(iii), the "***COBRA Payment Period***"). Notwithstanding the foregoing, if at any time the Company determines that its payment of COBRA premiums on the Employee's behalf would result in a violation of applicable law (including but not limited to the 2010 Patient Protection and Affordable Care Act, as amended by the 2010 Health Care and Education Reconciliation Act), then in lieu of paying COBRA premiums pursuant to this Section, the Company shall pay the Employee on the last day of each remaining month of the COBRA Payment Period, a fully taxable cash payment equal to the COBRA premium for such month, subject to applicable tax withholding (such amount, the "***Special Severance Payment***"), such Special Severance Payment to be made without regard to the Employee's payment of COBRA premiums and without regard to the expiration of the COBRA period prior to the end of the COBRA Payment Period. Nothing in this Agreement shall deprive the Employee of his rights under COBRA or ERISA for benefits under plans and policies arising under his employment by the Company.

(c) Employee shall not receive the Severance Benefits pursuant to Section 6.1(b) unless he executes the Release within the consideration period specified therein, which shall in no event be more than sixty (60) days, and until the Release becomes effective and can no longer be revoked by Employee under its terms. Employee's ability to receive benefits pursuant to Section 6.1(b) is further conditioned upon his: returning all Company property; complying with his post-termination obligations under this Agreement and the Proprietary Information Agreement; and complying with the Release including without limitation any non-disparagement and confidentiality provisions contained therein.

(d) The benefits provided to Employee pursuant to this Section 6.1 are in lieu of, and not in addition to, any benefits to which Employee may otherwise be entitled under any Company severance plan, policy or program.

(e) The damages caused by the termination of Employee's employment without Cause would be difficult to ascertain; therefore, the severance for which Employee is eligible pursuant to Section 6.1(b) above in exchange for the Release is agreed to by the parties as liquidated damages, to serve as full compensation, and not a penalty.

(f) For purposes of this Agreement, "***Severance Period***" shall mean (i) zero (0) months in the event a termination under this Section 6.1 or under Section 6.3 (an "***Involuntary Termination***") occurs on or before December 11, 2018 (ii) six (6) months in the event an Involuntary Termination occurs after December 11, 2018 and on or before December 11, 2019, and (iii) twelve (12) months in the event an Involuntary Termination occurs after December 11, 2019.

6.2 Termination by the Company for Cause. Subject to Section 6.2(b) below, the Company shall have the right to terminate Employee's employment with the Company at any time for Cause by giving notice as described in this Section 6.2 and in Section 6.6 of this Agreement.

(a) "***Cause***" for termination shall mean the occurrence of any of the following: (i) Employee's conviction of any felony or any crime involving fraud or dishonesty; (ii) Employee's participation in a fraud, act of dishonesty or other act of gross misconduct that adversely affects the Company; (iii) conduct by Employee that demonstrates Employee's gross unfitness to serve under circumstances that materially and adversely affect the Company; (iv) Employee's violation of any statutory or fiduciary duty, or duty of loyalty, owed to the Company; (v) Employee's breach of any material term of any contract between such Employee and the Company; and/or (vi) Employee's serious violation of a material Company policy. Whether a termination is for Cause shall be decided by the Board in its sole and exclusive judgment and discretion. Prior to termination for Cause pursuant to each event listed in (iii) and (iv) above, the Company shall give the Employee notice of such event(s), which notice shall specify in reasonable detail the circumstances constituting Cause, and an opportunity to explain the circumstances. Prior to any termination for Cause pursuant to each event listed in (v) and (vi) above, to the extent such event(s) is (are) capable of being cured by Employee, (A) the Company shall give the Employee notice of such event(s), which notice shall specify in reasonable detail the circumstances constituting Cause, and an opportunity to cure, and (B) there shall be no Cause with respect to any such event(s) if the Board determines in good faith that such events have been cured by Employee within fifteen (15) days after the delivery of such notice.

(b) In the event Employee's employment is terminated at any time for Cause, Employee will not receive the Severance Benefits described in Section 6.1(b), or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall pay to Employee the accrued but unpaid salary of Employee through the date of termination, together with all compensation and benefits payable to Employee based on his participation in any compensation or benefit plan, program or arrangement through the date of termination.

6.3 Resignation by the Employee With Good Reason.

(a) Employee may resign from Employee's employment with the Company for Good Reason by giving notice following the end of the Cure Period (as defined in this Section). For purposes of this Agreement, "***Good Reason***" for the Employee to terminate his employment hereunder shall mean any of following actions are taken by the Company without Employee's prior written consent: (i) a material reduction by the Company of Employee's Base Salary as initially set forth herein or as the same may be increased from time to time, provided, however, that if such reduction occurs in connection with a Company-wide decrease in executive team compensation, such reduction shall not constitute Good Reason; (ii) a material breach of this Agreement by the Company; (iii) the relocation of Employee's principal place of employment, without Employee's consent, by fifty (50) or more miles from his then-current principal place of employment immediately prior to such relocation; or (iv) a material reduction in Employee's title, duties, authority, or responsibilities relative to Employee's title, duties, authority, or responsibilities in effect immediately prior to such reduction; *provided, however*, that, any such termination by Employee shall only be deemed for Good Reason pursuant to this definition if: (1) Employee gives the Company written notice of his intent to terminate for Good Reason within thirty (30) days following the occurrence of the condition(s) that he believes constitute(s) Good Reason, which notice shall describe such condition(s); (2) the Company fails to remedy such condition(s) within thirty (30) days following receipt of the written notice (the "***Cure Period***"); and (3) Employee voluntarily terminates his employment within thirty (30) days following the end of the Cure Period.

(b) In the event Employee resigns from employment for Good Reason, then provided that the Employee executes and does not revoke the Release and subject to Section 6.1(c), then the Company shall pay to Employee the Severance Benefits described in Section 6.1(b).

6.4 Resignation by the Employee Without Good Reason.

(a) Employee may resign from Employee's employment with the Company at any time by giving notice as described in Section 6.6.

(b) In the event Employee resigns from Employee's employment with the Company other than for Good Reason, Employee will not receive the Severance Benefits, or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall pay to Employee the accrued but unpaid salary of Employee through the date of resignation, together with all compensation and benefits payable to Employee through the date of resignation under any compensation or benefit plan, program or arrangement during such period and Employee shall be eligible for any benefit continuation or conversion rights provided by the provisions of a benefit plan or by law.

6.5 Termination by Virtue of Death or Disability of the Employee.

(a) In the event of Employee's death while employed pursuant to this Agreement, all obligations of the parties hereunder shall terminate immediately, and the Company shall, pursuant to the Company's standard payroll policies, pay to the Employee's legal representatives Employee's accrued but unpaid salary through the date of death together with all compensation and benefits payable to Employee based on his participation in any compensation or benefit plan, program or arrangement through the date of termination.

(b) Subject to applicable state and federal law, the Company shall at all times have the right, upon written notice to the Employee, to terminate this Agreement based on the Employee's Disability (as defined below). Termination by the Company of the Employee's employment based on "***Disability***" shall mean termination because the Employee is unable due to a physical or mental condition to perform the essential functions of his position with or without reasonable accommodation for six (6) months in the aggregate during any twelve (12) month period or based on the written certification by two licensed physicians of the likely continuation of such condition for such period. This definition shall be interpreted and applied consistent with the Americans with Disabilities Act, the Family and Medical Leave Act, and other applicable law. In the event Employee's employment is terminated based on the Employee's Disability, Employee will not receive the Severance Benefits, or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall pay to Employee the accrued but unpaid salary of Employee through the date of termination, together with all compensation and benefits payable to Employee based on his participation in any compensation or benefit plan, program or arrangement through the date of termination.

6.6 Notice; Effective Date of Termination.

(a) Termination of Employee's employment (the "***Separation Date***") pursuant to this Agreement shall be effective as follows:

(i) ten (10) days after the Company has provided Employee with written notice of Employee's termination without Cause under Section 6.1;

(ii) For a termination for Cause: (aa) under Section 6.2(a)(i) or 6.2(a)(ii), immediately upon provision by the Company of written notice of the reasons to Employee; (bb) under Section 6.2(a)(iii) or 6.2(a)(iv), following the required written notice to Employee and expiration of the period during which Employee may explain; (cc) under Section 6.2(a)(v) or 6.2(a)(vi), following the required written notice to Employee and expiration of the 15-day cure period, if Employee has not cured;

(iii) immediately upon the Employee's death;

(iv) thirty (30) days after the Company gives notice to Employee of Employee's termination on account of Employee's Disability under Section 6.5, unless the Company specifies a later Separation Date, in which case, termination shall be effective as of such later Separation Date, *provided* that Employee has not returned to the full time performance of Employee's duties prior to such date;

(v) on the date specified in Employee's written notice of Employee's resignation for Good Reason, provided it is within thirty (30) days after the Cure Period has ended and the Company has failed to remedy any of the reasons for Good Reason set forth in Employee's initial notice under Section 6.3(a); or

(vi) ten (10) days after the Employee gives written notice to the Company of Employee's resignation, *provided* that the Company may set a Separation Date at any time between the date of notice and the date of resignation, in which case the Employee's resignation shall be effective as of such other date. Employee will receive compensation through the Separation Date.

(b) In the event notice of a termination under subsections (a)(iii) and (iv) is given orally, at the other party's request, the party giving notice must provide written confirmation of such notice within five (5) business days of the request in compliance with the requirement of Section 7.1 below. In the event of a termination for Cause, written confirmation shall specify the subsection(s) of the definition of Cause relied on to support the decision to terminate.

6.7 Cooperation With Company After Termination of Employment. Following termination of Employee's employment for any reason, Employee shall reasonably cooperate with the Company in all matters relating to the winding up of Employee's pending work including, but not limited to, any litigation in which the Company is involved, and the orderly transfer of any such pending work to such other Employees as may be designated by the Company.

6.8 Application of Section 409A. Notwithstanding anything to the contrary set forth herein, any payments and benefits provided under this Agreement that constitute "deferred compensation" within the meaning of Section 409A of the Internal Revenue Code of 1986, as amended ("***Code***") and the regulations and other guidance thereunder and any state law of similar effect (collectively, "***Section 409A***") shall not commence in connection with Employee's termination of employment unless and until Employee has also incurred a "separation from service" (as such term is defined in Treasury Regulation Section 1.409A-1(h)) ("***Separation From Service***"), unless the Company reasonably determines that such amounts may be provided to Employee without causing Employee to incur the additional 20% tax under Section 409A. It is intended that each installment of severance pay provided for in this Agreement is a separate "payment" for purposes of Treasury Regulation Section 1.409A-2(b)(2)(i). For the avoidance of doubt, it is intended that severance payments set forth in this Agreement satisfy, to the greatest extent possible, the exceptions from the application of Section 409A provided under Treasury Regulation Sections 1.409A-1(b)(4), 1.409A-1(b)(5), and 1.409A-1(b)(9). If the Company (or, if applicable, the successor entity thereto) determines that any payments or benefits constitute "deferred compensation" under Section 409A and Employee is, on the termination of service, a "specified employee" of the Company or any successor entity thereto, as such term is defined in Section 409A(a)(2)(B)(i) of the Code, then, solely to the extent necessary to avoid the incurrence of the adverse personal tax consequences under Section 409A, the timing of the payments and benefits shall be delayed until the earlier to occur of: (a) the date that is six months and one day after Employee's Separation From Service, or (b) the date of Employee's death (such applicable date, the "***Specified Employee Initial Payment Date***"). On the Specified Employee Initial Payment Date, the Company (or the successor entity thereto, as applicable) shall (i) pay to Employee a lump sum amount equal to the sum of the payments and benefits that Employee would otherwise have received through the Specified Employee Initial Payment Date if the commencement of the payment of such amounts had not been so delayed pursuant to this Section and (ii) commence paying the balance of the payments and benefits in accordance with the applicable payment schedules set forth in this Agreement. All reimbursements provided under this Agreement shall be subject to the following requirements: (i) the amount of in-kind benefits provided or reimbursable expenses incurred in one taxable year

shall not affect the in-kind benefits to be provided or the expenses eligible for reimbursement in any other taxable year, (ii) all reimbursements shall be paid as soon as administratively practicable, but in no event shall any reimbursement be paid after the last day of the taxable year following the taxable year in which the expense was incurred, and (iii) the right to reimbursement or in-kind benefits is not subject to liquidation or exchange for any other benefit. It is intended that all payments and benefits under this Agreement shall either comply with or be exempt from the requirements of Section 409A, and any ambiguity contained herein shall be interpreted in such manner so as to avoid adverse personal tax consequences under Section 409A. Notwithstanding the foregoing, the Company shall in no event be obligated to indemnify the Employee for any taxes or interest that may be assessed by the Internal Revenue Service pursuant to Section 409A of the Code to payments made pursuant to this Agreement.

7. GENERAL PROVISIONS.

7.1 Notices. Any notices required hereunder to be in writing shall be deemed effectively given: (a) upon personal delivery to the party to be notified, (b) when sent by electronic mail, telex or confirmed facsimile if sent during normal business hours of the recipient, and if not, then on the next business day, (c) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (d) one (1) day after deposit with a nationally recognized overnight courier, specifying next day delivery, with written verification of receipt. All communications shall be sent to the Company at its primary office location and to Employee at Employee's address as listed on the Company payroll, or at such other address as the Company or the Employee may designate by ten (10) days advance written notice to the other.

7.2 Severability. Whenever possible, each provision of this Agreement will be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be invalid, illegal or unenforceable in any respect under any applicable law or rule in any jurisdiction, such invalidity, illegality or unenforceability will not affect any other provision or any other jurisdiction, but this Agreement will be reformed, construed and enforced in such jurisdiction as if such invalid, illegal or unenforceable provisions had never been contained herein.

7.3 Waiver. If either party should waive any breach of any provisions of this Agreement, such party shall not thereby be deemed to have waived any preceding or succeeding breach of the same or any other provision of this Agreement.

7.4 Complete Agreement. This Agreement constitutes the entire agreement between Employee and the Company with regard to the subject matter hereof. This Agreement is the complete, final, and exclusive embodiment of their agreement with regard to this subject matter and supersedes any prior oral discussions or written communications and agreements. This Agreement is entered into without reliance on any promise or representation other than those expressly contained herein, and it cannot be modified or amended except in writing signed by Employee and an authorized officer of the Company. The parties have entered into a separate Proprietary Information Agreement and have or may enter into separate agreement related to stock option awards. These separate agreements govern other aspects of the relationship between the parties, have or may have provisions that survive termination of the Employee's employment under this Agreement, may be amended or superseded by the parties without regard to this Agreement and are enforceable according to their terms without regard to the enforcement provision of this Agreement.

7.5 Counterparts. This Agreement may be executed in separate counterparts, any one of which need not contain signatures of more than one party, but all of which taken together will constitute one and the same Agreement.

7.6 Headings. The headings of the sections hereof are inserted for convenience only and shall not be deemed to constitute a part hereof nor to affect the meaning thereof.

7.7 Successors and Assigns. The Company shall assign this Agreement and its rights and obligations hereunder in whole, but not in part, to any Company or other entity with or into which the Company may hereafter merge or consolidate or to which the Company may transfer all or substantially all of its assets, if in any such case said Company or other entity shall by operation of law or expressly in writing assume all obligations of the Company hereunder as fully as if it had been originally made a party hereto, but may not otherwise assign this Agreement or its rights and obligations hereunder. The Employee may not assign or transfer this Agreement or any rights or obligations hereunder, other than to his estate upon his death.

7.8 Choice of Law. All questions concerning the construction, validity and interpretation of this Agreement will be governed by the law of the Commonwealth of Pennsylvania, without regard to its rules of conflicts or choice of laws.

7.9 Indemnification. The Employee shall be entitled to indemnification to the maximum extent permitted by applicable law and the Company's Bylaws with terms no less favorable than provided to any other Company executive officer and subject to the terms of any separate written indemnification agreement. At all times during the Employee's employment, the Company shall maintain in effect a directors and officers liability insurance policy with the Employee as a covered officer.

7.10 Resolution of Disputes. The parties recognize that litigation in federal or state courts or before federal or state administrative agencies of disputes arising out of the Employee's employment with the Company or out of this Agreement, or the Employee's termination of employment or termination of this Agreement, may not be in the best interests of either the Employee or the Company, and may result in unnecessary costs, delays, complexities, and uncertainty. The parties agree that any dispute between the parties arising out of or relating to the negotiation, execution, performance or termination of this Agreement or the Employee's employment, including, but not limited to, any claim arising out of this Agreement, claims under Title VII of the Civil Rights Act of 1964, as amended, the Civil Rights Act of 1991, the Age Discrimination in Employment Act of 1967, the Americans with Disabilities Act of 1990, Section 1981 of the Civil Rights Act of 1966, as amended, the Family Medical Leave Act, the Employee Retirement Income Security Act, and any similar federal, state or local law, statute, regulation, or any common law doctrine, whether that dispute arises during or after employment, shall be settled by binding arbitration conducted before a single arbitrator by Judicial Arbitration and Mediation Services, Inc. ("***JAMS***") or its successor, under the then applicable JAMS rules;

provided however, that this dispute resolution provision shall not apply to any separate agreements between the parties that do not themselves specify arbitration as an exclusive remedy. The location for the arbitration shall be Philadelphia, Pennsylvania. Any award made by such panel shall be final, binding and conclusive on the parties for all purposes, and judgment upon the award rendered by the arbitrators may be entered in any court having jurisdiction thereof. The arbitrators' fees and expenses and all administrative fees and expenses associated with the filing of the arbitration shall be borne by the Company; *provided however*, that at the Employee's option, Employee may voluntarily pay up to one-half the costs and fees, for which Employee shall be reimbursed by the Company. The parties acknowledge and agree that their obligations to arbitrate under this Section survive the termination of this Agreement and continue after the termination of the employment relationship between Employee and the Company. The parties each further agree that the arbitration provisions of this Agreement shall provide each party with its **exclusive remedy**, and each party expressly waives any right it might have to seek redress in any other forum, except as otherwise expressly provided in this Agreement. By election arbitration as the means for final settlement of all claims, **the parties hereby waive their respective rights to, and agree not to, sue each other in any action in a Federal, State or local court with respect to such claims, but may seek to enforce in court an arbitration award rendered pursuant to this Agreement. The parties specifically agree to waive their respective rights to a trial by jury, and further agree that no demand, request or motion will be made for trial by jury.**

IN WITNESS WHEREOF, the parties have executed this Employment Agreement on the day and year first written above.

COMPANY:

Verrica Pharmaceuticals Inc.

By: /s/ Paul Manning
Name: Paul Manning
Title: Director

EMPLOYEE:

/s/ Ted White
Ted White

Exhibit A
Release Agreement

This Release Agreement ("***Release***" or "***Agreement***") is made by and between ("you") and . (the "***Company***"). A copy of this Release is an attachment to the Employment Agreement between the Company and you dated , 2017 (the "***Employment Agreement***"). Capitalized terms not defined in this Agreement carry the definition found in the Employment Agreement.

1. Severance Payments; Other Payments.

a. In consideration for your execution, return and non-revocation of this Release on or after your Separation Date, the Company will provide you with the following severance benefits: [to include payment of specific severance payments and COBRA benefits to be paid].

b. In addition, regardless of whether you sign this Agreement, the Company affirms that it will pay the following on the next regularly scheduled date on which payroll is run, as required under Section 6 of the Employment Agreement,: [to include payment of all salary, business expense reimbursements and other amounts due to employee that are not part of the severance].

2. Compliance with Section 409A. The Severance Benefits offered to you by the Company are payable in reliance on Treasury Regulation Section 1.409A-1(b)(9) and the short term deferral exemption in Treasury Regulation Section 1.409A-1(b)(4). For purposes of Code Section 409A, your right to receive any installment payments (whether pay in lieu of notice, Severance Benefits, reimbursements or otherwise) shall be treated as a right to receive a series of separate payments and, accordingly, each installment payment shall at all times be considered a separate and distinct payment. All payments and benefits are subject to applicable withholdings and deductions.

3. Release. In exchange for the Severance Benefits and other consideration, to which you would not otherwise be entitled, and except as otherwise set forth in this Agreement, you, on behalf of yourself and, to the extent permitted by law, on behalf of your spouse, heirs, executors, administrators, assigns, insurers, attorneys and other persons or entities, acting or purporting to act on your behalf (collectively, the "***Employee Parties***"), hereby generally and completely release, acquit and forever discharge the Company, its parents and subsidiaries, and its and their officers, directors, managers, partners, agents, representatives, employees, attorneys, shareholders, predecessors, successors, assigns, insurers and affiliates (the "***Company Parties***") of and from any and all claims, liabilities, demands, contentions, actions, causes of action, suits, costs, expenses, attorneys' fees, damages, indemnities, debts, judgments, levies, executions and obligations of every kind and nature, in law, equity, or otherwise, both known and unknown, suspected and unsuspected, disclosed and undisclosed, arising out of or in any way related to my employment with the Company and separation therefrom, arising at any time prior to and including the execution date of this Agreement, including but not limited to: all such claims and demands directly or indirectly arising out of or in any way connected with your employment with the Company or the termination of that employment; claims or demands related to salary, bonuses, commissions, vacation pay, the right to receive additional grants of stock, stock options or other ownership interests in the Company, fringe benefits, expense reimbursements, severance pay, or any other form of compensation; claims pursuant to any federal, state or local law, statute, or cause of action; tort law; or contract law (individually a "***Claim***" and collectively "***Claims***"). The Claims you are releasing and waiving in this Agreement include, but are not limited to, any and all Claims that any of the Company Parties:

- has violated its personnel policies, handbooks, contracts of employment, or covenants of good faith and fair dealing;
- has discriminated against you on the basis of age, race, color, sex (including sexual harassment), national origin, ancestry, disability, religion, sexual orientation, marital status, parental status, source of income, entitlement to benefits, any union activities or other protected category in violation of any local, state or federal law, constitution, ordinance, or regulation, including but not limited to: the Age Discrimination in Employment Act, as amended ("***ADEA***"); Title VII of the

Civil Rights Act of 1964, as amended; the Civil Rights Act of 1991; 42 U.S.C. § 1981, as amended; the Equal Pay Act; the Americans With Disabilities Act; the Genetic Information Nondiscrimination Act; the Family and Medical Leave Act; the Employee Retirement Income Security Act; the Employee Polygraph Protection Act; the Worker Adjustment and Retraining Notification Act; the Older Workers Benefit Protection Act; the anti-retaliation provisions of the Sarbanes-Oxley Act, or any other federal or state law regarding whistleblower retaliation; the Lilly Ledbetter Fair Pay Act; the Uniformed Services Employment and Reemployment Rights Act; the Fair Credit Reporting Act; and the National Labor Relations Act; and

- has violated any statute, public policy or common law (including, but not limited to, Claims for retaliatory discharge; negligent hiring, retention or supervision; defamation; intentional or negligent infliction of emotional distress and/or mental anguish; intentional interference with contract; negligence; detrimental reliance; loss of consortium to you or any member of your family and/or promissory estoppel).

Notwithstanding the foregoing, other than events expressly contemplated by this Agreement you do not waive or release rights or Claims that may arise: (i) from events that occur after the date this Release is executed; (ii) that relate to a breach of this Agreement; (iii) that relate to any existing ownership interest in the Company as of the date this Release is executed; (iv) that relate to my existing rights under any Company benefit plan or any plan or agreement related to equity ownership in the Company that arise after this Release is executed; and (v) any Claims which cannot be waived by law, including, without limitation, any rights you may have under applicable workers' compensation laws. Nothing in this Agreement shall prevent you from filing, cooperating with, or participating in any proceeding or investigation before the Equal Employment Opportunity Commission, United States Department of Labor, the National Labor Relations Board, the Occupational Safety and Health Administration, the Securities and Exchange Commission or any other federal government agency, or similar state or local agency ("***Government Agencies***"), or exercising any rights pursuant to Section 7 of the National Labor Relations Act. You further understand this Agreement does not limit your ability to voluntarily communicate with any Government Agencies or otherwise participate in any investigation or proceeding that may be conducted by any Government Agency, including providing documents or other information, without notice to the Company. While this Agreement does not limit your right to receive an award for information provided to the Securities and Exchange Commission, you understand and agree that, you are otherwise waiving, to the fullest extent permitted by law, any and all rights you may have to individual relief based on any Claims that you have released and any rights you have waived by signing this Agreement. If any Claim is not subject to release, to the extent permitted by law, you waive any right or ability to be a class or collective action representative or to otherwise participate in any putative or certified class, collective or multi-party action or proceeding based on such a Claim in which any of the Company Parties is a party.

4. Your Acknowledgments and Affirmations. You also acknowledge and agree that (i) the consideration given to you in exchange for the waiver and release in this Agreement is in addition to anything of value to which you were already entitled, and (ii) that you have been paid for all time worked, have received all the leave, leaves of absence and leave benefits and protections for which you are eligible, and have not suffered any on-the-job injury for which you have not already filed a Claim. You affirm that all of the decisions of the Company Parties regarding your pay and benefits through the date of your execution of this Agreement were not discriminatory based on age, disability, race, color, sex, religion, national origin or any other classification protected by law. You affirm that you have not filed or caused to be filed, and are not presently a party to, a Claim against any of the Company Parties. You further affirm that you have no known workplace injuries or occupational diseases. You acknowledge and affirm that you have not been retaliated against for reporting any allegation of corporate fraud or other wrongdoing by any of the Company Parties, or for exercising any rights protected by law, including any rights protected by the Fair Labor Standards Act, the Family Medical Leave Act or any related statute or local leave or disability accommodation laws, or any applicable state workers' compensation law. In addition, you acknowledge that you are knowingly and voluntarily waiving and releasing any rights you may have under the ADEA ("**ADEA Waiver**"). You also acknowledge that the consideration given for the ADEA Waiver is in addition to anything of value to which you were already entitled. You further acknowledge that you have been advised by this writing, as required by the ADEA, that: (a) your release and waiver herein does not apply to any rights or claims that arise after the date you sign this Agreement; (b) you should consult with an attorney prior to signing this Agreement; (c) you have twenty-one (21) days to consider this Agreement (although you may choose to voluntarily sign it sooner); (d) you have seven (7) days following the date you sign this Agreement to revoke it (by sending written revocation directly to [ ]; and (e) the Agreement will not be effective until the date upon which the revocation period has expired unexercised, which will be the eighth (8th) day after you sign this Agreement.

5. Return of Company Property. By the Separation Date, you agree to return to the Company all Company documents (and all copies thereof) and other Company property that you have had in your possession at any time, including, but not limited to, Company files, notes, drawings, records, business plans and forecasts, financial information, specifications, computer-recorded information, tangible property (including, but not limited to, computers), credit cards, entry cards, identification badges and keys; and, any materials of any kind that contain or embody any proprietary or confidential information of the Company (and all reproductions thereof). Please coordinate return of Company property with [ ]. **Receipt of the Severance Benefits described in Section 1 of this Agreement is expressly conditioned upon return of all Company property.**

6. Confidential Information, Non-Competition and Non-Solicitation Obligations. Both during and after your employment you acknowledge your continuing obligations under your Proprietary Information, Inventions, Non-competition and Non-Solicitation Agreement not to use or disclose any confidential or proprietary information of the Company and comply with your post-employment non-competition and non-solicitation restrictions. The Company acknowledges that you will not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that: (A) is made (i) in confidence to a federal, state, or local government official, either directly or indirectly, or to an attorney and (ii) solely for the purpose of reporting or investigating a suspected violation of law; or (B) is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal. In addition, in the event that you file a lawsuit for retaliation by the Company for reporting a suspected violation of law, you may disclose the trade secret to your attorney and use the trade secret information in the court proceeding, if you: (A) file any document containing the trade secret under seal; and (B) do not disclose the trade secret, except pursuant to court order.

7. Confidentiality. The provisions of this Agreement will be held in strictest confidence by you and will not be publicized or disclosed in any manner whatsoever; *provided, however*, that: (a) you may disclose this Agreement to your immediate family; (b) you may disclose this Agreement in confidence to your attorney, accountant, auditor, tax preparer, and financial advisor; and (c) you may disclose this Agreement insofar as such disclosure may be required by law. Notwithstanding the foregoing, nothing in this Agreement shall limit your right to discuss your employment with the Equal Employment Opportunity Commission, United States Department of Labor, the National Labor Relations Board, other federal government agency or similar state or local agency or to discuss the terms and conditions of your employment with others to the extent expressly permitted by Section 7 of the National Labor Relations Act.

8. Non-Disparagement. You and the Company agree not to disparage each other, and the other's attorneys, directors, managers, partners, employees, agents and affiliates, in any manner likely to be harmful to them or their business, business reputation or personal reputation; provided that you and the Company will respond accurately and fully to any question, inquiry or request for information when required by legal process. For purposes of this Section 8, the obligations of the Company shall apply only to the senior management team and the members of the Board of Directors. Notwithstanding the foregoing, nothing in this Agreement shall limit your right to voluntarily communicate with the Equal Employment Opportunity Commission, United States Department of Labor, the National Labor Relations Board, other federal government agency or similar state or local agency or to discuss the terms and conditions of your employment with others to the extent expressly permitted by Section 7 of the National Labor Relations Act.

9. No Admission. This Agreement does not constitute an admission by you or by the Company of any wrongful action or violation of any federal, state, or local statute, or common law rights, including those relating to the provisions of any law or statute concerning employment actions, or of any other possible or claimed violation of law or rights.

10. Breach. You agree that upon any material breach of this Agreement you will forfeit all amounts paid or owing to you under this Agreement. Further, you acknowledge that it may be impossible to assess the damages caused by your violation of the terms of Sections 5, 6, 7 and 8 of this Agreement and further agree that any threatened or actual violation or breach of those Sections of this Agreement will constitute immediate and irreparable injury to the Company. You therefore agree that, in addition to any and all other damages and remedies available to the Company upon your breach of this Agreement, the Company shall be entitled to an injunction to prevent you from violating or breaching this Agreement.

11. Miscellaneous. This Agreement is entered into without reliance on any promise or representation, written or oral, other than those expressly contained herein, and it supersedes any other such promises, warranties or representations. This Agreement may not be modified or amended except in a writing signed by both you and a duly authorized officer of the Company. This Agreement will bind the heirs, personal representatives, successors and assigns of both you and the Company, and inure to the benefit of both you and the Company, their heirs, successors and assigns. If any provision of this Agreement is determined to be invalid or unenforceable, in whole or in part, this determination will not affect any other provision of this Agreement and the provision in question will be modified by the court so as to be rendered enforceable. This Agreement will be deemed to have been entered into and will be construed and enforced in accordance with the laws of the Commonwealth of Pennsylvania as applied to contracts made and to be performed entirely within the Commonwealth of Pennsylvania.

VERRICA PHARMACEUTICALS INC.

By: _____
Name:
Title:

_____
Ted White

EXHIBIT 10.8

EMPLOYMENT AGREEMENT

This **EMPLOYMENT AGREEMENT** (the "***Agreement***") is entered into effective **February 7, 2018** (the "***Effective Date***"), by and between Verrica Pharmaceuticals Inc., a Delaware corporation (the "***Company***") and Chris Degnan (the "***Employee***").

The Company desires to employ the Employee in the capacity of full-time Chief Financial Officer ("***CFO***") pursuant to the terms of this Agreement and, in connection therewith, to compensate the Employee for Employee's personal services to the Company; and

The Employee wishes to be employed by the Company and provide personal services to the Company in return for certain compensation.

Accordingly, in consideration of the mutual promises and covenants contained herein, the parties agree to the following:

1. EMPLOYMENT BY THE COMPANY.

1.1 At-Will Employment. Employee shall be employed by the Company on an "at-will" basis, meaning either the Company or Employee may terminate Employee's employment at any time, with or without cause or advanced notice. Any contrary representations that may have been made to Employee shall be superseded by this Agreement. This Agreement shall constitute the full and complete agreement between Employee and the Company on the "at-will" nature of Employee's employment with the Company, which may be changed only in an express written agreement signed by Employee and a duly authorized officer of the Company. Employee's rights to any compensation following a termination shall be only as set forth in Section 6.

1.2 Position. Subject to the terms set forth herein, the Company agrees to employ Employee, initially, in the position of CFO and Employee hereby accepts such employment. During the term of Employee's employment with the Company, Employee will devote Employee's best efforts and substantially all of Employee's business time and attention to the business of the Company.

1.3 Duties. Employee will report to the Chief Executive Officer ("***CEO***") of the Company, performing such duties as are normally associated with his position and such duties as are assigned to him from time to time, subject to the oversight and direction of the CEO and the Company's Board of Directors (the "***Board***"). Employee shall perform his duties under this Agreement principally out of the Company's corporate headquarters to be established within twenty-five (25) miles of West Chester, Pennsylvania or such other location as assigned. In addition, the Employee shall make such business trips to such places as may be necessary or advisable for the efficient operations of the Company.

1.4 Company Policies and Benefits. The employment relationship between the parties shall also be subject to the Company's personnel policies and procedures as they may be interpreted, adopted, revised or deleted from time to time in the Company's sole discretion. The Employee will be eligible to participate on the same basis as similarly situated employees in the Company's benefit plans in effect from time to time during his employment. All matters of eligibility for coverage or benefits under any benefit plan shall be determined in accordance with the provisions of such plan. The Company reserves the right to change, alter, or terminate any benefit plan in its sole discretion. Notwithstanding the foregoing, in the event that the terms of this Agreement differ from or are in conflict with the Company's general employment policies or practices, this Agreement shall control.

1.5 Paid Time Off. The Employee will be eligible for up to fifteen (15) days of paid time off per calendar year in accordance with any paid leave policy adopted by the Company from time to time.

2. COMPENSATION.

2.1 Salary. Employee shall receive for Employee's services to be rendered hereunder an initial annualized base salary of $325,000 per year, subject to review and adjustment from time to time by the Company in its sole discretion, payable subject to standard federal and state payroll withholding requirements in accordance with Company's standard payroll practices ("***Base Salary***").

2.2 Bonus.

(a) **During Employment**. Employee shall be eligible to earn an annual performance bonus of up to 40% of his Base Salary ("***Annual Bonus***"). The Annual Bonus will be based upon the Board's assessment of the Employee's performance and the Company's attainment of targeted goals as set by the Board in its sole discretion. The Annual Bonus, if any, will be subject to applicable payroll deductions and withholdings. Following the close of each calendar year, the Board will determine whether the Employee has earned the Annual Bonus, and the amount of any Annual Bonus, based on the set criteria. No amount of the Annual Bonus is guaranteed, and the Employee must be an employee in good standing on the Annual Bonus payment date to be eligible to receive an Annual Bonus; no partial or prorated bonuses will be provided. The Annual Bonus, if earned, will be paid no later than March 15 of the calendar year immediately following the applicable calendar year for which the Annual Bonus is being measured. The Employee's eligibility for an Annual Bonus is subject to change in the discretion of the Board (or any authorized committee thereof).

(b) **Upon Termination**. In the event Employee leaves the employ of the Company for any reason prior to payment of any bonus, he is not eligible for such bonus, prorated or otherwise.

2.3 Stock Option.

(a) **Option Grant**. Subject to approval of the Board, which the Company agrees to use its best efforts to secure, Employee will be issued options to purchase 125,000 shares of the Company's common stock (subject to adjustment for stock splits, dividends and combinations and similar events as will be set forth in the option agreement), with a 10-year term, pursuant and subject to the Company's 2013 Equity Incentive Plan ("***Plan***") and the Company's standard form of Stock Option Agreement ("***Stock Agreement***') between the

Employee and the Company. The option shall be an incentive stock option to the extent permissible under Section 422 of the Internal Revenue Code and will have an exercise price per share equal to the fair market value of a share of the Company's common stock, to be determined in accordance with Section 409A.

(b) **Vesting**. The Option shall vest over a period of four years as follows: (i) 25% of the total shares subject to the Option shall vest on , 2019, and (ii) 1/48th of total shares subject to the Option shall vest monthly thereafter over the remaining three years of the vesting period, subject to Employee's continuous service as of each applicable date. The foregoing notwithstanding, in the event of a Sale Event (as defined below), subject to Employee's continuous service as of the closing of such Sale Event, all of Employee's then-unvested Option shall immediately and automatically vest as of the Closing of such Sale Event. For purposes hereof, "***Sale Event***" shall mean the date on which the Company enters into a binding agreement pursuant to which: (A) any person, including a "group" as defined below, will acquire ownership of all or substantially all of the Company's equity, excluding any acquisition of stock by a person or group of persons who were members or shareholders of such company immediately prior to such acquisition; or (B) any person, including a "group" as defined below, will acquire all or substantially all of the assets of the Company. For purposes of this definition, the term "group" shall have the same meaning as in Section 13(d)(3) of the Securities Exchange Act of 1934. None of the following shall constitute a Sale Event for purposes of this Agreement: (x) the sale of stock of the Company or any successor in an initial public offering, (y) any restructuring, merger or conversion of the Company to a corporation or to an entity organized under the laws of any jurisdiction other than the jurisdiction of the applicable company's organization, whether by merger, conversion, consolidation, contribution of shares or assets, or otherwise, and where members immediately before such restructuring, merger or conversion own any of the capital and voting interests of the resulting or surviving corporation or entity, or (z) any transaction or series of transactions principally for bona fide equity financing purposes in which cash is received by the Company or any successor or indebtedness of the Company is cancelled or converted or a combination thereof. Furthermore, and notwithstanding anything herein to the contrary, an event which does not constitute a change in the ownership, a change in the effective control, or a change in the ownership of a substantial portion of the assets of the Company, each as defined in Section 1.409A-3(i)(5) of the Treasury Regulations (Title 26 of the Code of Federal Regulations, as amended from time to time), shall not constitute a Sale Event for purposes of this Agreement.

2.4 Expense Reimbursement. The Company will reimburse Employee for all reasonable, documented business expenses incurred in connection with his services hereunder, in accordance with the Company's business expense reimbursement policies and procedures as may be in effect from time to time.

3. PROPRIETARY INFORMATION, INVENTIONS, NON-COMPETITION AND NON-SOLICITATION OBLIGATIONS. The parties hereto have entered into an **Employee Confidential Information, Inventions, Non-Solicitation and Non-Competition Agreement** (the "***Proprietary Information Agreement***"), which may be amended by the parties from time to time without regard to this Agreement. The Proprietary Information Agreement contains provisions that are intended by the parties to survive and do survive termination or expiration of this Agreement.

4. OUTSIDE ACTIVITIES. Except with the prior written consent of the Company's Board, Employee will not, while employed by the Company, undertake or engage in any other employment, occupation or business enterprise that would interfere with Employee's responsibilities and the performance of Employee's duties hereunder except for (i) reasonable time devoted to volunteer services for or on behalf of such religious, educational, non-profit and/or other charitable organization as Employee may wish to serve; (ii) reasonable time devoted to activities in the non-profit and business communities consistent with Employee's duties; (iii) reasonable time devoted to service on boards of directors of companies that are not competitive with the Company, do not otherwise present a conflict of interest and would not otherwise interfere with Employee's responsibilities and the performance of Employee's duties hereunder, subject to the prior written approval of the Board (which approval shall not be unreasonably withheld); and (iv) such other activities that would not interfere with Employee's responsibilities and the performance of Employee's duties hereunder as may be specifically approved by the Board (which approval shall not be unreasonably withheld). This restriction shall not, however, preclude the Employee from owning less than one percent (1%) of the total outstanding shares of a publicly traded company.

5. NO CONFLICT WITH EXISTING OBLIGATIONS. Employee represents that Employee's performance of all the terms of this Agreement and as an Employee of the Company do not and will not breach any agreement or obligation of any kind made prior to Employee's employment by the Company, including agreements or obligations Employee may have with prior employers or entities for which Employee has provided services. Employee has not entered into, and Employee agrees that Employee will not enter into, any agreement or obligation, either written or oral, in conflict herewith.

6. TERMINATION OF EMPLOYMENT. The parties acknowledge that Employee's employment relationship with the Company is at-will. Either Employee or the Company may terminate the employment relationship at any time, with or without Cause. The provisions in this Section govern the amount of compensation, if any, to be provided to Employee upon termination of employment and do not alter this at-will status.

6.1 Termination by the Company Without Cause.

(a) The Company shall have the right to terminate Employee's employment with the Company pursuant to this Section 6.1 at any time without "Cause" (as defined in Section 6.2(a) below) by giving notice as described in Section 6.6 of this Agreement. A termination pursuant to Section 6.5 below is not a termination without "Cause" for purposes of receiving the benefits described in this Section 6.1.

(b) In the event Employee's employment is terminated without Cause, then provided that the Employee executes and does not revoke a separation agreement that includes a general release substantially in the form attached hereto as **Exhibit A** (the "***Release***"), and subject to Section 6.1(c) (the date that the Release becomes effective and may no longer be revoked by the Employee is referred to as the "***Release Date***"), then:

(i) the Company shall pay to Employee an amount equal to Employee's then current Base Salary for the Severance Period (as defined below), less applicable withholdings and deductions (the "***Severance Payment***"), in installments in accordance with the Company's ordinary payroll practices commencing on the Company's first regular payroll date that is more than sixty (60) days following the Separation Date (as defined below), and shall be for any accrued Base Salary for the sixty (60) day period plus the period from the sixtieth (60^{th}) day until the regular payroll date, if applicable, and all salary continuation payments thereafter, if any, shall be made on the Company's regular payroll dates; and

(ii) if the Employee timely elects continued coverage under COBRA for himself and his covered dependents under the Company's group health plans following such termination, then the Employee will be entitled to the following COBRA benefits (the "***COBRA Benefits***," together with the Severance Payment, the "***Severance Benefits***")**:** the Company shall pay the COBRA premiums necessary to continue the Employee's and his covered dependents' health insurance coverage in effect for himself (and his covered dependents) on the termination date until the earliest of (x) a number of months following the termination date equal to the Severance Period (the "***COBRA Severance Period***"); (y) the date when the Employee becomes eligible for health insurance coverage in connection with new employment or self-employment; or (iii) the date the Employee ceases to be eligible for COBRA continuation coverage for any reason, including plan termination (such period from the termination date through the earlier of (i)-(iii), the "***COBRA Payment Period***"). Notwithstanding the foregoing, if at any time the Company determines that its payment of COBRA premiums on the Employee's behalf would result in a violation of applicable law (including but not limited to the 2010 Patient Protection and Affordable Care Act, as amended by the 2010 Health Care and Education Reconciliation Act), then in lieu of paying COBRA premiums pursuant to this Section, the Company shall pay the Employee on the last day of each remaining month of the COBRA Payment Period, a fully taxable cash payment equal to the COBRA premium for such month, subject to applicable tax withholding (such amount, the "***Special Severance Payment***"), such Special Severance Payment to be made without regard to the Employee's payment of COBRA premiums and without regard to the expiration of the COBRA period prior to the end of the COBRA Payment Period. Nothing in this Agreement shall deprive the Employee of his rights under COBRA or ERISA for benefits under plans and policies arising under his employment by the Company.

(c) Employee shall not receive the Severance Benefits pursuant to Section 6.1(b) unless he executes the Release within the consideration period specified therein, which shall in no event be more than sixty (60) days, and until the Release becomes effective and can no longer be revoked by Employee under its terms. Employee's ability to receive benefits pursuant to Section 6.1(b) is further conditioned upon his: returning all Company property; complying with his post-termination obligations under this Agreement and the Proprietary Information Agreement; and complying with the Release including without limitation any non-disparagement and confidentiality provisions contained therein.

(d) The benefits provided to Employee pursuant to this Section 6.1 are in lieu of, and not in addition to, any benefits to which Employee may otherwise be entitled under any Company severance plan, policy or program.

(e) The damages caused by the termination of Employee's employment without Cause would be difficult to ascertain; therefore, the severance for which Employee is eligible pursuant to Section 6.1(b) above in exchange for the Release is agreed to by the parties as liquidated damages, to serve as full compensation, and not a penalty.

(f) For purposes of this Agreement, "***Severance Period***" shall mean (i) zero (0) months in the event a termination under this Section 6.1 or under Section 6.3 (an "***Involuntary Termination***") occurs on or before , 2019 (ii) six (6) months in the event an Involuntary Termination occurs after , 2019 and on or before , 2020, and (iii) twelve (12) months in the event an Involuntary Termination occurs after , 2020.

6.2 Termination by the Company for Cause. Subject to Section 6.2(b) below, the Company shall have the right to terminate Employee's employment with the Company at any time for Cause by giving notice as described in this Section 6.2 and in Section 6.6 of this Agreement.

(a) "***Cause***" for termination shall mean the occurrence of any of the following: (i) Employee's conviction of any felony or any crime involving fraud or dishonesty; (ii) Employee's participation in a fraud, act of dishonesty or other act of gross misconduct that adversely affects the Company; (iii) conduct by Employee that demonstrates Employee's gross unfitness to serve under circumstances that materially and adversely affect the Company; (iv) Employee's violation of any statutory or fiduciary duty, or duty of loyalty, owed to the Company; (v) Employee's breach of any material term of any contract between such Employee and the Company; and/or (vi) Employee's serious violation of a material Company policy. Whether a termination is for Cause shall be decided by the Board in its sole and exclusive judgment and discretion. Prior to termination for Cause pursuant to each event listed in (iii) and (iv) above, the Company shall give the Employee notice of such event(s), which notice shall specify in reasonable detail the circumstances constituting Cause, and an opportunity to explain the circumstances. Prior to any termination for Cause pursuant to each event listed in (v) and (vi) above, to the extent such event(s) is (are) capable of being cured by Employee, (A) the Company shall give the Employee notice of such event(s), which notice shall specify in reasonable detail the circumstances constituting Cause, and an opportunity to cure, and (B) there shall be no Cause with respect to any such event(s) if the Board determines in good faith that such events have been cured by Employee within fifteen (15) days after the delivery of such notice.

(b) In the event Employee's employment is terminated at any time for Cause, Employee will not receive the Severance Benefits described in Section 6.1(b), or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall pay to Employee the accrued but unpaid salary of Employee through the date of termination, together with all compensation and benefits payable to Employee based on his participation in any compensation or benefit plan, program or arrangement through the date of termination.

6.3 Resignation by the Employee With Good Reason.

(a) Employee may resign from Employee's employment with the Company for Good Reason by giving notice following the end of the Cure Period (as defined in this Section). For purposes of this Agreement, "***Good Reason***" for the Employee to terminate his employment hereunder shall mean any of following actions are taken by the Company without Employee's prior written consent: (i) a material reduction by the Company of Employee's Base Salary as initially set forth herein or as the same may be increased from time to time, provided, however, that if such reduction occurs in connection with a Company-wide decrease in executive team compensation, such reduction shall not constitute Good Reason; (ii) a material breach of this Agreement by the Company; (iii) the relocation of Employee's principal place of employment, without Employee's consent, by fifty (50) or more miles from his then-current principal place of employment immediately prior to such relocation; or (iv) a material reduction in Employee's title, duties, authority, or responsibilities relative to Employee's title, duties, authority, or responsibilities in effect immediately prior to such reduction; *provided, however*, that, any such termination by Employee shall only be deemed for Good Reason pursuant to this definition if: (1) Employee gives the Company written notice of his intent to terminate for Good Reason within thirty (30) days following the occurrence of the condition(s) that he believes constitute(s) Good Reason, which notice shall describe such condition(s); (2) the Company fails to remedy such condition(s) within thirty (30) days following receipt of the written notice (the "***Cure Period***"); and (3) Employee voluntarily terminates his employment within thirty (30) days following the end of the Cure Period.

(b) In the event Employee resigns from employment for Good Reason, then provided that the Employee executes and does not revoke the Release and subject to Section 6.1(c), then the Company shall pay to Employee the Severance Benefits described in Section 6.1(b).

6.4 Resignation by the Employee Without Good Reason.

(a) Employee may resign from Employee's employment with the Company at any time by giving notice as described in Section 6.6.

(b) In the event Employee resigns from Employee's employment with the Company other than for Good Reason, Employee will not receive the Severance Benefits, or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall pay to Employee the accrued but unpaid salary of Employee through the date of resignation, together with all compensation and benefits payable to Employee through the date of resignation under any compensation or benefit plan, program or arrangement during such period and Employee shall be eligible for any benefit continuation or conversion rights provided by the provisions of a benefit plan or by law.

6.5 Termination by Virtue of Death or Disability of the Employee.

(a) In the event of Employee's death while employed pursuant to this Agreement, all obligations of the parties hereunder shall terminate immediately, and the Company shall, pursuant to the Company's standard payroll policies, pay to the Employee's legal representatives Employee's accrued but unpaid salary through the date of death together with all compensation and benefits payable to Employee based on his participation in any compensation or benefit plan, program or arrangement through the date of termination.

(b) Subject to applicable state and federal law, the Company shall at all times have the right, upon written notice to the Employee, to terminate this Agreement based on the Employee's Disability (as defined below). Termination by the Company of the Employee's employment based on "***Disability***" shall mean termination because the Employee is unable due to a physical or mental condition to perform the essential functions of his position with or without reasonable accommodation for six (6) months in the aggregate during any twelve (12) month period or based on the written certification by two licensed physicians of the likely continuation of such condition for such period. This definition shall be interpreted and applied consistent with the Americans with Disabilities Act, the Family and Medical Leave Act, and other applicable law. In the event Employee's employment is terminated based on the Employee's Disability, Employee will not receive the Severance Benefits, or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall pay to Employee the accrued but unpaid salary of Employee through the date of termination, together with all compensation and benefits payable to Employee based on his participation in any compensation or benefit plan, program or arrangement through the date of termination.

6.6 Notice; Effective Date of Termination.

(a) Termination of Employee's employment (the "***Separation Date***") pursuant to this Agreement shall be effective as follows:

(i) ten (10) days after the Company has provided Employee with written notice of Employee's termination without Cause under Section 6.1;

(ii) For a termination for Cause: (aa) under Section 6.2(a)(i) or 6.2(a)(ii), immediately upon provision by the Company of written notice of the reasons to Employee; (bb) under Section 6.2(a)(iii) or 6.2(a)(iv), following the required written notice to Employee and expiration of the period during which Employee may explain; (cc) under Section 6.2(a)(v) or 6.2(a)(vi), following the required written notice to Employee and expiration of the 15-day cure period, if Employee has not cured;

(iii) immediately upon the Employee's death;

(iv) thirty (30) days after the Company gives notice to Employee of Employee's termination on account of Employee's Disability under Section 6.5, unless the Company specifies a later Separation Date, in which case, termination shall be effective as of such later Separation Date, *provided* that Employee has not returned to the full time performance of Employee's duties prior to such date;

(v) on the date specified in Employee's written notice of Employee's resignation for Good Reason, provided it is within thirty (30) days after the Cure Period has ended and the Company has failed to remedy any of the reasons for Good Reason set forth in Employee's initial notice under Section 6.3(a); or

(vi) ten (10) days after the Employee gives written notice to the Company of Employee's resignation, *provided* that the Company may set a Separation Date at any time between the date of notice and the date of resignation, in which case the Employee's resignation shall be effective as of such other date. Employee will receive compensation through the Separation Date.

(b) In the event notice of a termination under subsections (a)(iii) and (iv) is given orally, at the other party's request, the party giving notice must provide written confirmation of such notice within five (5) business days of the request in compliance with the requirement of Section 7.1 below. In the event of a termination for Cause, written confirmation shall specify the subsection(s) of the definition of Cause relied on to support the decision to terminate.

6.7 Cooperation With Company After Termination of Employment. Following termination of Employee's employment for any reason, Employee shall reasonably cooperate with the Company in all matters relating to the winding up of Employee's pending work including, but not limited to, any litigation in which the Company is involved, and the orderly transfer of any such pending work to such other Employees as may be designated by the Company.

6.8 Application of Section 409A. Notwithstanding anything to the contrary set forth herein, any payments and benefits provided under this Agreement that constitute "deferred compensation" within the meaning of Section 409A of the Internal Revenue Code of 1986, as amended ("***Code***") and the regulations and other guidance thereunder and any state law of similar effect (collectively, "***Section 409A***") shall not commence in connection with Employee's termination of employment unless and until Employee has also incurred a "separation from service" (as such term is defined in Treasury Regulation Section 1.409A-1(h)) ("***Separation From Service***"), unless the Company reasonably determines that such amounts may be provided to Employee without causing Employee to incur the additional 20% tax under Section 409A. It is intended that each installment of severance pay provided for in this Agreement is a separate "payment" for purposes of Treasury Regulation Section 1.409A-2(b)(2)(i). For the avoidance of doubt, it is intended that severance payments set forth in this Agreement satisfy, to the greatest extent possible, the exceptions from the application of Section 409A provided under Treasury Regulation Sections 1.409A-1(b)(4), 1.409A-1(b)(5), and 1.409A-1(b)(9). If the Company (or, if applicable, the successor entity thereto) determines that any payments or benefits constitute "deferred compensation" under Section 409A and Employee is, on the termination of service, a "specified employee" of the Company or any successor entity thereto, as such term is defined in Section 409A(a)(2)(B)(i) of the Code, then, solely to the extent necessary to avoid the incurrence of the adverse personal tax consequences under Section 409A, the timing of the payments and benefits shall be delayed until the earlier to occur of: (a) the date that is six months and one day after Employee's Separation From Service, or (b) the date of Employee's death (such applicable date, the "***Specified Employee Initial Payment Date***"). On the Specified Employee Initial Payment Date, the Company (or the successor entity thereto, as applicable) shall (i) pay to Employee a lump sum amount equal to the sum of the payments and benefits that Employee would otherwise have received through the Specified Employee Initial Payment Date if the commencement of the payment of such amounts had not been so delayed pursuant to this Section and (ii) commence paying the balance of the payments and benefits in

accordance with the applicable payment schedules set forth in this Agreement. All reimbursements provided under this Agreement shall be subject to the following requirements: (i) the amount of in-kind benefits provided or reimbursable expenses incurred in one taxable year shall not affect the in-kind benefits to be provided or the expenses eligible for reimbursement in any other taxable year, (ii) all reimbursements shall be paid as soon as administratively practicable, but in no event shall any reimbursement be paid after the last day of the taxable year following the taxable year in which the expense was incurred, and (iii) the right to reimbursement or in-kind benefits is not subject to liquidation or exchange for any other benefit. It is intended that all payments and benefits under this Agreement shall either comply with or be exempt from the requirements of Section 409A, and any ambiguity contained herein shall be interpreted in such manner so as to avoid adverse personal tax consequences under Section 409A. Notwithstanding the foregoing, the Company shall in no event be obligated to indemnify the Employee for any taxes or interest that may be assessed by the Internal Revenue Service pursuant to Section 409A of the Code to payments made pursuant to this Agreement.

7. GENERAL PROVISIONS.

7.1 Notices. Any notices required hereunder to be in writing shall be deemed effectively given: (a) upon personal delivery to the party to be notified, (b) when sent by electronic mail, telex or confirmed facsimile if sent during normal business hours of the recipient, and if not, then on the next business day, (c) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (d) one (1) day after deposit with a nationally recognized overnight courier, specifying next day delivery, with written verification of receipt. All communications shall be sent to the Company at its primary office location and to Employee at Employee's address as listed on the Company payroll, or at such other address as the Company or the Employee may designate by ten (10) days advance written notice to the other.

7.2 Severability. Whenever possible, each provision of this Agreement will be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be invalid, illegal or unenforceable in any respect under any applicable law or rule in any jurisdiction, such invalidity, illegality or unenforceability will not affect any other provision or any other jurisdiction, but this Agreement will be reformed, construed and enforced in such jurisdiction as if such invalid, illegal or unenforceable provisions had never been contained herein.

7.3 Waiver. If either party should waive any breach of any provisions of this Agreement, such party shall not thereby be deemed to have waived any preceding or succeeding breach of the same or any other provision of this Agreement.

7.4 Complete Agreement. This Agreement constitutes the entire agreement between Employee and the Company with regard to the subject matter hereof. This Agreement is the complete, final, and exclusive embodiment of their agreement with regard to this subject matter and supersedes any prior oral discussions or written communications and agreements. This Agreement is entered into without reliance on any promise or representation other than those expressly contained herein, and it cannot be modified or amended except in writing signed by Employee and an authorized officer of the Company. The parties have entered into a separate

Proprietary Information Agreement and have or may enter into separate agreement related to stock option awards. These separate agreements govern other aspects of the relationship between the parties, have or may have provisions that survive termination of the Employee's employment under this Agreement, may be amended or superseded by the parties without regard to this Agreement and are enforceable according to their terms without regard to the enforcement provision of this Agreement.

7.5 Counterparts. This Agreement may be executed in separate counterparts, any one of which need not contain signatures of more than one party, but all of which taken together will constitute one and the same Agreement.

7.6 Headings. The headings of the sections hereof are inserted for convenience only and shall not be deemed to constitute a part hereof nor to affect the meaning thereof.

7.7 Successors and Assigns. The Company shall assign this Agreement and its rights and obligations hereunder in whole, but not in part, to any Company or other entity with or into which the Company may hereafter merge or consolidate or to which the Company may transfer all or substantially all of its assets, if in any such case said Company or other entity shall by operation of law or expressly in writing assume all obligations of the Company hereunder as fully as if it had been originally made a party hereto, but may not otherwise assign this Agreement or its rights and obligations hereunder. The Employee may not assign or transfer this Agreement or any rights or obligations hereunder, other than to his estate upon his death.

7.8 Choice of Law. All questions concerning the construction, validity and interpretation of this Agreement will be governed by the law of the Commonwealth of Pennsylvania, without regard to its rules of conflicts or choice of laws.

7.9 Indemnification. The Employee shall be entitled to indemnification to the maximum extent permitted by applicable law and the Company's Bylaws with terms no less favorable than provided to any other Company executive officer and subject to the terms of any separate written indemnification agreement. At all times during the Employee's employment, the Company shall maintain in effect a directors and officers liability insurance policy with the Employee as a covered officer.

7.10 Resolution of Disputes. The parties recognize that litigation in federal or state courts or before federal or state administrative agencies of disputes arising out of the Employee's employment with the Company or out of this Agreement, or the Employee's termination of employment or termination of this Agreement, may not be in the best interests of either the Employee or the Company, and may result in unnecessary costs, delays, complexities, and uncertainty. The parties agree that any dispute between the parties arising out of or relating to the negotiation, execution, performance or termination of this Agreement or the Employee's employment, including, but not limited to, any claim arising out of this Agreement, claims under Title VII of the Civil Rights Act of 1964, as amended, the Civil Rights Act of 1991, the Age Discrimination in Employment Act of 1967, the Americans with Disabilities Act of 1990, Section 1981 of the Civil Rights Act of 1966, as amended, the Family Medical Leave Act, the Employee Retirement Income Security Act, and any similar federal, state or local law, statute,

regulation, or any common law doctrine, whether that dispute arises during or after employment, shall be settled by binding arbitration conducted before a single arbitrator by Judicial Arbitration and Mediation Services, Inc. ("***JAMS***") or its successor, under the then applicable JAMS rules; *provided however,* that this dispute resolution provision shall not apply to any separate agreements between the parties that do not themselves specify arbitration as an exclusive remedy. The location for the arbitration shall be Philadelphia, Pennsylvania. Any award made by such panel shall be final, binding and conclusive on the parties for all purposes, and judgment upon the award rendered by the arbitrators may be entered in any court having jurisdiction thereof. The arbitrators' fees and expenses and all administrative fees and expenses associated with the filing of the arbitration shall be borne by the Company; *provided however*, that at the Employee's option, Employee may voluntarily pay up to one-half the costs and fees, for which Employee shall be reimbursed by the Company. The parties acknowledge and agree that their obligations to arbitrate under this Section survive the termination of this Agreement and continue after the termination of the employment relationship between Employee and the Company. The parties each further agree that the arbitration provisions of this Agreement shall provide each party with its **exclusive remedy**, and each party expressly waives any right it might have to seek redress in any other forum, except as otherwise expressly provided in this Agreement. By election arbitration as the means for final settlement of all claims, **the parties hereby waive their respective rights to, and agree not to, sue each other in any action in a Federal, State or local court with respect to such claims, but may seek to enforce in court an arbitration award rendered pursuant to this Agreement. The parties specifically agree to waive their respective rights to a trial by jury, and further agree that no demand, request or motion will be made for trial by jury.**

IN WITNESS WHEREOF, the parties have executed this Employment Agreement on the day and year first written above.

COMPANY:

Verrica Pharmaceuticals Inc.

By: /s/ Ted White
Name: Ted White
Title: CEO

EMPLOYEE:

/s/ Chris Degnan
Chris Degnan

Exhibit A
Release Agreement

This Release Agreement ("***Release***" or "***Agreement***") is made by and between ("you") and . (the "***Company***"). A copy of this Release is an attachment to the Employment Agreement between the Company and you dated , 2018 (the "***Employment Agreement***"). Capitalized terms not defined in this Agreement carry the definition found in the Employment Agreement.

1. Severance Payments; Other Payments.

a. In consideration for your execution, return and non-revocation of this Release on or after your Separation Date, the Company will provide you with the following severance benefits: [to include payment of specific severance payments and COBRA benefits to be paid].

b. In addition, regardless of whether you sign this Agreement, the Company affirms that it will pay the following on the next regularly scheduled date on which payroll is run, as required under Section 6 of the Employment Agreement,: [to include payment of all salary, business expense reimbursements and other amounts due to employee that are not part of the severance].

2. Compliance with Section 409A. The Severance Benefits offered to you by the Company are payable in reliance on Treasury Regulation Section 1.409A-1(b)(9) and the short term deferral exemption in Treasury Regulation Section 1.409A-1(b)(4). For purposes of Code Section 409A, your right to receive any installment payments (whether pay in lieu of notice, Severance Benefits, reimbursements or otherwise) shall be treated as a right to receive a series of separate payments and, accordingly, each installment payment shall at all times be considered a separate and distinct payment. All payments and benefits are subject to applicable withholdings and deductions.

3. Release. In exchange for the Severance Benefits and other consideration, to which you would not otherwise be entitled, and except as otherwise set forth in this Agreement, you, on behalf of yourself and, to the extent permitted by law, on behalf of your spouse, heirs, executors, administrators, assigns, insurers, attorneys and other persons or entities, acting or purporting to act on your behalf (collectively, the "***Employee Parties***"), hereby generally and completely release, acquit and forever discharge the Company, its parents and subsidiaries, and its and their officers, directors, managers, partners, agents, representatives, employees, attorneys, shareholders, predecessors, successors, assigns, insurers and affiliates (the "***Company Parties***") of and from any and all claims, liabilities, demands, contentions, actions, causes of action, suits, costs, expenses, attorneys' fees, damages, indemnities, debts, judgments, levies, executions and obligations of every kind and nature, in law, equity, or otherwise, both known and unknown, suspected and unsuspected, disclosed and undisclosed, arising out of or in any way related to my employment with the Company and separation therefrom, arising at any time prior to and including the execution date of this Agreement, including but not limited to: all such claims and demands directly or indirectly arising out of or in any way connected with your employment with the Company or the termination of that employment; claims or demands related to salary, bonuses, commissions, vacation pay, the right to receive additional grants of stock, stock options or other ownership interests in the Company, fringe benefits, expense reimbursements, severance pay, or any other form of compensation; claims pursuant to any federal, state or local law, statute, or cause of action; tort law; or contract law (individually a "***Claim***" and collectively "***Claims***"). The Claims you are releasing and waiving in this Agreement include, but are not limited to, any and all Claims that any of the Company Parties:

- has violated its personnel policies, handbooks, contracts of employment, or covenants of good faith and fair dealing;
- has discriminated against you on the basis of age, race, color, sex (including sexual harassment), national origin, ancestry, disability, religion, sexual orientation, marital status, parental status, source of income, entitlement to benefits, any union activities or other protected category in violation of any local, state or federal law, constitution, ordinance, or regulation, including but not limited to: the Age Discrimination in Employment Act, as amended ("***ADEA***"); Title VII of the

Civil Rights Act of 1964, as amended; the Civil Rights Act of 1991; 42 U.S.C. § 1981, as amended; the Equal Pay Act; the Americans With Disabilities Act; the Genetic Information Nondiscrimination Act; the Family and Medical Leave Act; the Employee Retirement Income Security Act; the Employee Polygraph Protection Act; the Worker Adjustment and Retraining Notification Act; the Older Workers Benefit Protection Act; the anti-retaliation provisions of the Sarbanes-Oxley Act, or any other federal or state law regarding whistleblower retaliation; the Lilly Ledbetter Fair Pay Act; the Uniformed Services Employment and Reemployment Rights Act; the Fair Credit Reporting Act; and the National Labor Relations Act; and

- has violated any statute, public policy or common law (including, but not limited to, Claims for retaliatory discharge; negligent hiring, retention or supervision; defamation; intentional or negligent infliction of emotional distress and/or mental anguish; intentional interference with contract; negligence; detrimental reliance; loss of consortium to you or any member of your family and/or promissory estoppel).

Notwithstanding the foregoing, other than events expressly contemplated by this Agreement you do not waive or release rights or Claims that may arise: (i) from events that occur after the date this Release is executed; (ii) that relate to a breach of this Agreement; (iii) that relate to any existing ownership interest in the Company as of the date this Release is executed; (iv) that relate to my existing rights under any Company benefit plan or any plan or agreement related to equity ownership in the Company that arise after this Release is executed; and (v) any Claims which cannot be waived by law, including, without limitation, any rights you may have under applicable workers' compensation laws. Nothing in this Agreement shall prevent you from filing, cooperating with, or participating in any proceeding or investigation before the Equal Employment Opportunity Commission, United States Department of Labor, the National Labor Relations Board, the Occupational Safety and Health Administration, the Securities and Exchange Commission or any other federal government agency, or similar state or local agency ("***Government Agencies***"), or exercising any rights pursuant to Section 7 of the National Labor Relations Act. You further understand this Agreement does not limit your ability to voluntarily communicate with any Government Agencies or otherwise participate in any investigation or proceeding that may be conducted by any Government Agency, including providing documents or other information, without notice to the Company. While this Agreement does not limit your right to receive an award for information provided to the Securities and Exchange Commission, you understand and agree that, you are otherwise waiving, to the fullest extent permitted by law, any and all rights you may have to individual relief based on any Claims that you have released and any rights you have waived by signing this Agreement. If any Claim is not subject to release, to the extent permitted by law, you waive any right or ability to be a class or collective action representative or to otherwise participate in any putative or certified class, collective or multi-party action or proceeding based on such a Claim in which any of the Company Parties is a party.

4. Your Acknowledgments and Affirmations. You also acknowledge and agree that (i) the consideration given to you in exchange for the waiver and release in this Agreement is in addition to anything of value to which you were already entitled, and (ii) that you have been paid for all time worked, have received all the leave, leaves of absence and leave benefits and protections for which you are eligible, and have not suffered any on-the-job injury for which you have not already filed a Claim. You affirm that all of the decisions of the Company Parties regarding your pay and benefits through the date of your execution of this Agreement were not discriminatory based on age, disability, race, color, sex, religion, national origin or any other classification protected by law. You affirm that you have not filed or caused to be filed, and are not presently a party to, a Claim against any of the Company Parties. You further affirm that you have no known workplace injuries or occupational diseases. You acknowledge and affirm that you have not been retaliated against for reporting any allegation of corporate fraud or other wrongdoing by any of the Company Parties, or for exercising any rights protected by law, including any rights protected by the Fair Labor Standards Act, the Family Medical Leave Act or any related statute or local leave or disability accommodation laws, or any applicable state workers' compensation law. In addition, you acknowledge that you are knowingly and voluntarily waiving and releasing any rights you may have under the ADEA ("**ADEA Waiver**"). You also acknowledge that the consideration given for the ADEA Waiver is in addition to anything of value to which you were already entitled. You further acknowledge that you have been advised by this writing, as required by the ADEA, that: (a) your release and waiver herein does not apply to any rights or claims that arise after the date you sign this Agreement; (b) you should consult with an attorney prior to signing this Agreement; (c) you have twenty-one (21) days to consider this Agreement (although you may choose to voluntarily sign it sooner); (d) you have seven (7) days following the date you sign this Agreement to revoke it (by sending written revocation directly to [ ]; and (e) the Agreement will not be effective until the date upon which the revocation period has expired unexercised, which will be the eighth (8th) day after you sign this Agreement.

5. Return of Company Property. By the Separation Date, you agree to return to the Company all Company documents (and all copies thereof) and other Company property that you have had in your possession at any time, including, but not limited to, Company files, notes, drawings, records, business plans and forecasts, financial information, specifications, computer-recorded information, tangible property (including, but not limited to, computers), credit cards, entry cards, identification badges and keys; and, any materials of any kind that contain or embody any proprietary or confidential information of the Company (and all reproductions thereof). Please coordinate return of Company property with [ ]. **Receipt of the Severance Benefits described in Section 1 of this Agreement is expressly conditioned upon return of all Company property.**

6. Confidential Information, Non-Competition and Non-Solicitation Obligations. Both during and after your employment you acknowledge your continuing obligations under your Proprietary Information, Inventions, Non-competition and Non-Solicitation Agreement not to use or disclose any confidential or proprietary information of the Company and comply with your post-employment non-competition and non-solicitation restrictions. The Company acknowledges that you will not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that: (A) is made (i) in confidence to a federal, state, or local government official, either directly or indirectly, or to an attorney and (ii) solely for the purpose of reporting or investigating a suspected violation of law; or (B) is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal. In addition, in the event that you file a lawsuit for retaliation by the Company for reporting a suspected violation of law, you may disclose the trade secret to your attorney and use the trade secret information in the court proceeding, if you: (A) file any document containing the trade secret under seal; and (B) do not disclose the trade secret, except pursuant to court order.

7. Confidentiality. The provisions of this Agreement will be held in strictest confidence by you and will not be publicized or disclosed in any manner whatsoever; *provided, however*, that: (a) you may disclose this Agreement to your immediate family; (b) you may disclose this Agreement in confidence to your attorney, accountant, auditor, tax preparer, and financial advisor; and (c) you may disclose this Agreement insofar as such disclosure may be required by law. Notwithstanding the foregoing, nothing in this Agreement shall limit your right to discuss your employment with the Equal Employment Opportunity Commission, United States Department of Labor, the National Labor Relations Board, other federal government agency or similar state or local agency or to discuss the terms and conditions of your employment with others to the extent expressly permitted by Section 7 of the National Labor Relations Act.

8. Non-Disparagement. You and the Company agree not to disparage each other, and the other's attorneys, directors, managers, partners, employees, agents and affiliates, in any manner likely to be harmful to them or their business, business reputation or personal reputation; provided that you and the Company will respond accurately and fully to any question, inquiry or request for information when required by legal process. For purposes of this Section 8, the obligations of the Company shall apply only to the senior management team and the members of the Board of Directors. Notwithstanding the foregoing, nothing in this Agreement shall limit your right to voluntarily communicate with the Equal Employment Opportunity Commission, United States Department of Labor, the National Labor Relations Board, other federal government agency or similar state or local agency or to discuss the terms and conditions of your employment with others to the extent expressly permitted by Section 7 of the National Labor Relations Act.

9. No Admission. This Agreement does not constitute an admission by you or by the Company of any wrongful action or violation of any federal, state, or local statute, or common law rights, including those relating to the provisions of any law or statute concerning employment actions, or of any other possible or claimed violation of law or rights.

10. Breach. You agree that upon any material breach of this Agreement you will forfeit all amounts paid or owing to you under this Agreement. Further, you acknowledge that it may be impossible to assess the damages caused by your violation of the terms of Sections 5, 6, 7 and 8 of this Agreement and further agree that any threatened or actual violation or breach of those Sections of this Agreement will constitute immediate and irreparable injury to the Company. You therefore agree that, in addition to any and all other damages and remedies available to the Company upon your breach of this Agreement, the Company shall be entitled to an injunction to prevent you from violating or breaching this Agreement.

11. Miscellaneous. This Agreement is entered into without reliance on any promise or representation, written or oral, other than those expressly contained herein, and it supersedes any other such promises, warranties or representations. This Agreement may not be modified or amended except in a writing signed by both you and a duly authorized officer of the Company. This Agreement will bind the heirs, personal representatives, successors and assigns of both you and the Company, and inure to the benefit of both you and the Company, their heirs, successors and assigns. If any provision of this Agreement is determined to be invalid or unenforceable, in whole or in part, this determination will not affect any other provision of this Agreement and the provision in question will be modified by the court so as to be rendered enforceable. This Agreement will be deemed to have been entered into and will be construed and enforced in accordance with the laws of the Commonwealth of Pennsylvania as applied to contracts made and to be performed entirely within the Commonwealth of Pennsylvania.

VERRICA PHARMACEUTICALS INC.

By: _____
Name:
Title:

_____
Chris Degnan

AMENDMENT TO EMPLOYMENT AGREEMENT

This Amendment to Employment Agreement (this "***Amendment***"), dated as of February 14, 2018, is made by and between Verrica Pharmaceuticals Inc., a Delaware corporation (the "***Company***"), and Chris Degnan ("***Employee***").

BACKGROUND

A. The Company and Employee executed an Employment Agreement on February 7, 2018 (the "***Agreement***").

B. The Company and Consultant desire to amend the Agreement, as set forth herein.

AGREEMENT

NOW, THEREFORE, in consideration of the mutual covenants and agreements contained in this Amendment and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned agree as follows:

1. Employee Start Date. The Company and Employee agree that the Employee's employment start date shall be March 5, 2018.

2. Amendments. The Company and Employee agree that the Agreement shall be amended as follows:

a. The preamble of the Agreement is hereby amended to insert "March 5" into the highlighted space.

b. Section 2.3(b) of the Agreement is hereby amended to insert "March 5" into the highlighted space.

c. Section 6.1(f) of the Agreement is hereby amended to insert "March 5" into each of the highlighted spaces in such subsection.

3. Effect of Amendment. Except as otherwise provided herein, all of the provisions of the Agreement are hereby ratified and confirmed and all the terms, conditions and provisions thereof remain in full force and effect.

[Signature Page to Follow]

IN WITNESS WHEREOF, the undersigned have executed this Amendment to Employment Agreement as of the date first set forth above.

COMPANY:

VERRICA PHARMACEUTICALS INC.

By: /s/ Ted White
Name: Ted White
Title: CEO

EMPLOYEE:

/s/ Chris Degnan
Name: Chris Degnan

EXHIBIT 10.9

EMPLOYMENT AGREEMENT

This **EMPLOYMENT AGREEMENT** (the "***Agreement***") is entered into effective **January 30, 2018** (the "***Effective Date***"), by and between Verrica Pharmaceuticals Inc., a Delaware corporation (the "***Company***") and Linda S. Palczuk (the "***Employee***").

The Company desires to employ the Employee in the capacity of full-time Chief Operating Officer ("***COO***") pursuant to the terms of this Agreement and, in connection therewith, to compensate the Employee for Employee's personal services to the Company; and

The Employee wishes to be employed by the Company and provide personal services to the Company in return for certain compensation.

Accordingly, in consideration of the mutual promises and covenants contained herein, the parties agree to the following:

1. EMPLOYMENT BY THE COMPANY.

1.1 At-Will Employment. Employee shall be employed by the Company on an "at-will" basis, meaning either the Company or Employee may terminate Employee's employment at any time, with or without cause or advanced notice. Any contrary representations that may have been made to Employee shall be superseded by this Agreement. This Agreement shall constitute the full and complete agreement between Employee and the Company on the "at-will" nature of Employee's employment with the Company, which may be changed only in an express written agreement signed by Employee and a duly authorized officer of the Company. Employee's rights to any compensation following a termination shall be only as set forth in Section 6.

1.2 Position. Subject to the terms set forth herein, the Company agrees to employ Employee, initially, in the position of COO and Employee hereby accepts such employment. During the term of Employee's employment with the Company, Employee will devote Employee's best efforts and substantially all of Employee's business time and attention to the business of the Company.

1.3 Duties. Employee will report to the Chief Executive Officer ("***CEO***") of the Company, performing such duties as are normally associated with her position and such duties as are assigned to her from time to time, subject to the oversight and direction of the CEO and the Company's Board of Directors (the "***Board***"). Employee shall perform her duties under this Agreement principally out of the Company's corporate headquarters to be established within twenty-five (25) miles of West Chester, Pennsylvania or such other location as assigned. In addition, the Employee shall make such business trips to such places as may be necessary or advisable for the efficient operations of the Company.

1.4 Company Policies and Benefits. The employment relationship between the parties shall also be subject to the Company's personnel policies and procedures as they may be interpreted, adopted, revised or deleted from time to time in the Company's sole discretion. The Employee will be eligible to participate on the same basis as similarly situated employees in the Company's benefit plans in effect from time to time during her employment. All matters of eligibility for coverage or benefits under any benefit plan shall be determined in accordance with the provisions of such plan. The Company reserves the right to change, alter, or terminate any benefit plan in its sole discretion. Notwithstanding the foregoing, in the event that the terms of this Agreement differ from or are in conflict with the Company's general employment policies or practices, this Agreement shall control.

1.5 Paid Time Off. The Employee will be eligible for up to fifteen (15) days of paid time off per calendar year in accordance with any paid leave policy adopted by the Company from time to time.

2. COMPENSATION.

2.1 Salary. Employee shall receive for Employee's services to be rendered hereunder an initial annualized base salary of $350,000 per year, subject to review and adjustment from time to time by the Company in its sole discretion, payable subject to standard federal and state payroll withholding requirements in accordance with Company's standard payroll practices ("***Base Salary***").

2.2 Bonus.

(a) **During Employment**. Employee shall be eligible to earn an annual performance bonus of up to 40% of her Base Salary ("***Annual Bonus***"). The Annual Bonus will be based upon the Board's assessment of the Employee's performance and the Company's attainment of targeted goals as set by the Board in its sole discretion. The Annual Bonus, if any, will be subject to applicable payroll deductions and withholdings. Following the close of each calendar year, the Board will determine whether the Employee has earned the Annual Bonus, and the amount of any Annual Bonus, based on the set criteria. No amount of the Annual Bonus is guaranteed, and the Employee must be an employee in good standing on the Annual Bonus payment date to be eligible to receive an Annual Bonus; no partial or prorated bonuses will be provided. The Annual Bonus, if earned, will be paid no later than March 15 of the calendar year immediately following the applicable calendar year for which the Annual Bonus is being measured. The Employee's eligibility for an Annual Bonus is subject to change in the discretion of the Board (or any authorized committee thereof).

(b) **Upon Termination**. In the event Employee leaves the employ of the Company for any reason prior to payment of any bonus, she is not eligible for such bonus, prorated or otherwise.

2.3 Stock Option.

(a) **Option Grant**. Subject to approval of the Board, which the Company agrees to use its best efforts to secure, Employee will be issued options to purchase 195,000 shares of the Company's common stock (subject to adjustment for stock splits, dividends and combinations and similar events as will be set forth in the option agreement), with a 10-year term, pursuant and subject to the Company's 2013 Equity Incentive Plan ("***Plan***") and the Company's standard form of Stock Option Agreement ("***Stock Agreement***") between the

Employee and the Company. The option shall be an incentive stock option to the extent permissible under Section 422 of the Internal Revenue Code and will have an exercise price per share equal to the fair market value of a share of the Company's common stock, to be determined in accordance with Section 409A.

(b) **Vesting**. The Option shall vest over a period of four years as follows: (i) 25% of the total shares subject to the Option shall vest on , 2019, and (ii) 1/48th of total shares subject to the Option shall vest monthly thereafter over the remaining three years of the vesting period, subject to Employee's continuous service as of each applicable date. The foregoing notwithstanding, in the event of a Sale Event (as defined below), subject to Employee's continuous service as of the closing of such Sale Event, all of Employee's then-unvested Option shall immediately and automatically vest as of the Closing of such Sale Event. For purposes hereof, "***Sale Event***" shall mean the date on which the Company enters into a binding agreement pursuant to which: (A) any person, including a "group" as defined below, will acquire ownership of all or substantially all of the Company's equity, excluding any acquisition of stock by a person or group of persons who were members or shareholders of such company immediately prior to such acquisition; or (B) any person, including a "group" as defined below, will acquire all or substantially all of the assets of the Company. For purposes of this definition, the term "group" shall have the same meaning as in Section 13(d)(3) of the Securities Exchange Act of 1934. None of the following shall constitute a Sale Event for purposes of this Agreement: (x) the sale of stock of the Company or any successor in an initial public offering, (y) any restructuring, merger or conversion of the Company to a corporation or to an entity organized under the laws of any jurisdiction other than the jurisdiction of the applicable company's organization, whether by merger, conversion, consolidation, contribution of shares or assets, or otherwise, and where members immediately before such restructuring, merger or conversion own any of the capital and voting interests of the resulting or surviving corporation or entity, or (z) any transaction or series of transactions principally for bona fide equity financing purposes in which cash is received by the Company or any successor or indebtedness of the Company is cancelled or converted or a combination thereof. Furthermore, and notwithstanding anything herein to the contrary, an event which does not constitute a change in the ownership, a change in the effective control, or a change in the ownership of a substantial portion of the assets of the Company, each as defined in Section 1.409A-3(i)(5) of the Treasury Regulations (Title 26 of the Code of Federal Regulations, as amended from time to time), shall not constitute a Sale Event for purposes of this Agreement.

2.4 Expense Reimbursement. The Company will reimburse Employee for all reasonable, documented business expenses incurred in connection with her services hereunder, in accordance with the Company's business expense reimbursement policies and procedures as may be in effect from time to time.

3. PROPRIETARY INFORMATION, INVENTIONS, NON-COMPETITION AND NON-SOLICITATION OBLIGATIONS. The parties hereto have entered into an **Employee Confidential Information, Inventions, Non-Solicitation and Non-Competition Agreement** (the "***Proprietary Information Agreement***"), which may be amended by the parties from time to time without regard to this Agreement. The Proprietary Information Agreement contains provisions that are intended by the parties to survive and do survive termination or expiration of this Agreement.

4. OUTSIDE ACTIVITIES. Except with the prior written consent of the Company's Board, Employee will not, while employed by the Company, undertake or engage in any other employment, occupation or business enterprise that would interfere with Employee's responsibilities and the performance of Employee's duties hereunder except for (i) reasonable time devoted to volunteer services for or on behalf of such religious, educational, non-profit and/or other charitable organization as Employee may wish to serve; (ii) reasonable time devoted to activities in the non-profit and business communities consistent with Employee's duties; (iii) reasonable time devoted to service on boards of directors of companies that are not competitive with the Company, do not otherwise present a conflict of interest and would not otherwise interfere with Employee's responsibilities and the performance of Employee's duties hereunder, subject to the prior written approval of the Board (which approval shall not be unreasonably withheld); and (iv) such other activities that would not interfere with Employee's responsibilities and the performance of Employee's duties hereunder as may be specifically approved by the Board (which approval shall not be unreasonably withheld). This restriction shall not, however, preclude the Employee from owning less than one percent (1%) of the total outstanding shares of a publicly traded company.

5. NO CONFLICT WITH EXISTING OBLIGATIONS. Employee represents that Employee's performance of all the terms of this Agreement and as an Employee of the Company do not and will not breach any agreement or obligation of any kind made prior to Employee's employment by the Company, including agreements or obligations Employee may have with prior employers or entities for which Employee has provided services. Employee has not entered into, and Employee agrees that Employee will not enter into, any agreement or obligation, either written or oral, in conflict herewith.

6. TERMINATION OF EMPLOYMENT. The parties acknowledge that Employee's employment relationship with the Company is at-will. Either Employee or the Company may terminate the employment relationship at any time, with or without Cause. The provisions in this Section govern the amount of compensation, if any, to be provided to Employee upon termination of employment and do not alter this at-will status.

6.1 Termination by the Company Without Cause.

(a) The Company shall have the right to terminate Employee's employment with the Company pursuant to this Section 6.1 at any time without "Cause" (as defined in Section 6.2(a) below) by giving notice as described in Section 6.6 of this Agreement. A termination pursuant to Section 6.5 below is not a termination without "Cause" for purposes of receiving the benefits described in this Section 6.1.

(b) In the event Employee's employment is terminated without Cause, then provided that the Employee executes and does not revoke a separation agreement that includes a general release substantially in the form attached hereto as **Exhibit A** (the "***Release***"), and subject to Section 6.1(c) (the date that the Release becomes effective and may no longer be revoked by the Employee is referred to as the "***Release Date***"), then:

(i) the Company shall pay to Employee an amount equal to Employee's then current Base Salary for the Severance Period (as defined below), less applicable withholdings and deductions (the "***Severance Payment***"), in installments in accordance with the Company's ordinary payroll practices commencing on the Company's first regular payroll date that is more than sixty (60) days following the Separation Date (as defined below), and shall be for any accrued Base Salary for the sixty (60) day period plus the period from the sixtieth (60^{th}) day until the regular payroll date, if applicable, and all salary continuation payments thereafter, if any, shall be made on the Company's regular payroll dates; and

(ii) if the Employee timely elects continued coverage under COBRA for herself and her covered dependents under the Company's group health plans following such termination, then the Employee will be entitled to the following COBRA benefits (the "***COBRA Benefits***," together with the Severance Payment, the "***Severance Benefits***")**:** the Company shall pay the COBRA premiums necessary to continue the Employee's and her covered dependents' health insurance coverage in effect for herself (and her covered dependents) on the termination date until the earliest of (x) a number of months following the termination date equal to the Severance Period (the "***COBRA Severance Period***"); (y) the date when the Employee becomes eligible for health insurance coverage in connection with new employment or self-employment; or (iii) the date the Employee ceases to be eligible for COBRA continuation coverage for any reason, including plan termination (such period from the termination date through the earlier of (i)-(iii), the "***COBRA Payment Period***"). Notwithstanding the foregoing, if at any time the Company determines that its payment of COBRA premiums on the Employee's behalf would result in a violation of applicable law (including but not limited to the 2010 Patient Protection and Affordable Care Act, as amended by the 2010 Health Care and Education Reconciliation Act), then in lieu of paying COBRA premiums pursuant to this Section, the Company shall pay the Employee on the last day of each remaining month of the COBRA Payment Period, a fully taxable cash payment equal to the COBRA premium for such month, subject to applicable tax withholding (such amount, the "***Special Severance Payment***"), such Special Severance Payment to be made without regard to the Employee's payment of COBRA premiums and without regard to the expiration of the COBRA period prior to the end of the COBRA Payment Period. Nothing in this Agreement shall deprive the Employee of her rights under COBRA or ERISA for benefits under plans and policies arising under her employment by the Company.

(c) Employee shall not receive the Severance Benefits pursuant to Section 6.1(b) unless she executes the Release within the consideration period specified therein, which shall in no event be more than sixty (60) days, and until the Release becomes effective and can no longer be revoked by Employee under its terms. Employee's ability to receive benefits pursuant to Section 6.1(b) is further conditioned upon her: returning all Company property; complying with her post-termination obligations under this Agreement and the Proprietary Information Agreement; and complying with the Release including without limitation any non-disparagement and confidentiality provisions contained therein.

(d) The benefits provided to Employee pursuant to this Section 6.1 are in lieu of, and not in addition to, any benefits to which Employee may otherwise be entitled under any Company severance plan, policy or program.

(e) The damages caused by the termination of Employee's employment without Cause would be difficult to ascertain; therefore, the severance for which Employee is eligible pursuant to Section 6.1(b) above in exchange for the Release is agreed to by the parties as liquidated damages, to serve as full compensation, and not a penalty.

(f) For purposes of this Agreement, "***Severance Period***" shall mean (i) zero (0) months in the event a termination under this Section 6.1 or under Section 6.3 (an "***Involuntary Termination***") occurs on or before , 2019 (ii) six (6) months in the event an Involuntary Termination occurs after , 2019 and on or before , 2020, and (iii) twelve (12) months in the event an Involuntary Termination occurs after , 2020.

6.2 Termination by the Company for Cause. Subject to Section 6.2(b) below, the Company shall have the right to terminate Employee's employment with the Company at any time for Cause by giving notice as described in this Section 6.2 and in Section 6.6 of this Agreement.

(a) "***Cause***" for termination shall mean the occurrence of any of the following: (i) Employee's conviction of any felony or any crime involving fraud or dishonesty; (ii) Employee's participation in a fraud, act of dishonesty or other act of gross misconduct that adversely affects the Company; (iii) conduct by Employee that demonstrates Employee's gross unfitness to serve under circumstances that materially and adversely affect the Company; (iv) Employee's violation of any statutory or fiduciary duty, or duty of loyalty, owed to the Company; (v) Employee's breach of any material term of any contract between such Employee and the Company; and/or (vi) Employee's serious violation of a material Company policy. Whether a termination is for Cause shall be decided by the Board in its sole and exclusive judgment and discretion. Prior to termination for Cause pursuant to each event listed in (iii) and (iv) above, the Company shall give the Employee notice of such event(s), which notice shall specify in reasonable detail the circumstances constituting Cause, and an opportunity to explain the circumstances. Prior to any termination for Cause pursuant to each event listed in (v) and (vi) above, to the extent such event(s) is (are) capable of being cured by Employee, (A) the Company shall give the Employee notice of such event(s), which notice shall specify in reasonable detail the circumstances constituting Cause, and an opportunity to cure, and (B) there shall be no Cause with respect to any such event(s) if the Board determines in good faith that such events have been cured by Employee within fifteen (15) days after the delivery of such notice.

(b) In the event Employee's employment is terminated at any time for Cause, Employee will not receive the Severance Benefits described in Section 6.1(b), or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall pay to Employee the accrued but unpaid salary of Employee through the date of termination, together with all compensation and benefits payable to Employee based on her participation in any compensation or benefit plan, program or arrangement through the date of termination.

6.3 Resignation by the Employee With Good Reason.

(a) Employee may resign from Employee's employment with the Company for Good Reason by giving notice following the end of the Cure Period (as defined in this Section). For purposes of this Agreement, "***Good Reason***" for the Employee to terminate her employment hereunder shall mean any of following actions are taken by the Company without Employee's prior written consent: (i) a material reduction by the Company of Employee's Base Salary as initially set forth herein or as the same may be increased from time to time, provided, however, that if such reduction occurs in connection with a Company-wide decrease in executive team compensation, such reduction shall not constitute Good Reason; (ii) a material breach of this Agreement by the Company; (iii) the relocation of Employee's principal place of employment, without Employee's consent, by fifty (50) or more miles from her then-current principal place of employment immediately prior to such relocation; or (iv) a material reduction in Employee's title, duties, authority, or responsibilities relative to Employee's title, duties, authority, or responsibilities in effect immediately prior to such reduction; *provided, however*, that, any such termination by Employee shall only be deemed for Good Reason pursuant to this definition if: (1) Employee gives the Company written notice of her intent to terminate for Good Reason within thirty (30) days following the occurrence of the condition(s) that she believes constitute(s) Good Reason, which notice shall describe such condition(s); (2) the Company fails to remedy such condition(s) within thirty (30) days following receipt of the written notice (the "***Cure Period***"); and (3) Employee voluntarily terminates her employment within thirty (30) days following the end of the Cure Period.

(b) In the event Employee resigns from employment for Good Reason, then provided that the Employee executes and does not revoke the Release and subject to Section 6.1(c), then the Company shall pay to Employee the Severance Benefits described in Section 6.1(b).

6.4 Resignation by the Employee Without Good Reason.

(a) Employee may resign from Employee's employment with the Company at any time by giving notice as described in Section 6.6.

(b) In the event Employee resigns from Employee's employment with the Company other than for Good Reason, Employee will not receive the Severance Benefits, or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall pay to Employee the accrued but unpaid salary of Employee through the date of resignation, together with all compensation and benefits payable to Employee through the date of resignation under any compensation or benefit plan, program or arrangement during such period and Employee shall be eligible for any benefit continuation or conversion rights provided by the provisions of a benefit plan or by law.

6.5 Termination by Virtue of Death or Disability of the Employee.

(a) In the event of Employee's death while employed pursuant to this Agreement, all obligations of the parties hereunder shall terminate immediately, and the Company shall, pursuant to the Company's standard payroll policies, pay to the Employee's legal representatives Employee's accrued but unpaid salary through the date of death together with all compensation and benefits payable to Employee based on her participation in any compensation or benefit plan, program or arrangement through the date of termination.

(b) Subject to applicable state and federal law, the Company shall at all times have the right, upon written notice to the Employee, to terminate this Agreement based on the Employee's Disability (as defined below). Termination by the Company of the Employee's employment based on "***Disability***" shall mean termination because the Employee is unable due to a physical or mental condition to perform the essential functions of her position with or without reasonable accommodation for six (6) months in the aggregate during any twelve (12) month period or based on the written certification by two licensed physicians of the likely continuation of such condition for such period. This definition shall be interpreted and applied consistent with the Americans with Disabilities Act, the Family and Medical Leave Act, and other applicable law. In the event Employee's employment is terminated based on the Employee's Disability, Employee will not receive the Severance Benefits, or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall pay to Employee the accrued but unpaid salary of Employee through the date of termination, together with all compensation and benefits payable to Employee based on her participation in any compensation or benefit plan, program or arrangement through the date of termination.

6.6 Notice; Effective Date of Termination.

(a) Termination of Employee's employment (the "***Separation Date***") pursuant to this Agreement shall be effective as follows:

(i) ten (10) days after the Company has provided Employee with written notice of Employee's termination without Cause under Section 6.1;

(ii) For a termination for Cause: (aa) under Section 6.2(a)(i) or 6.2(a)(ii), immediately upon provision by the Company of written notice of the reasons to Employee; (bb) under Section 6.2(a)(iii) or 6.2(a)(iv), following the required written notice to Employee and expiration of the period during which Employee may explain; (cc) under Section 6.2(a)(v) or 6.2(a)(vi), following the required written notice to Employee and expiration of the 15-day cure period, if Employee has not cured;

(iii) immediately upon the Employee's death;

(iv) thirty (30) days after the Company gives notice to Employee of Employee's termination on account of Employee's Disability under Section 6.5, unless the Company specifies a later Separation Date, in which case, termination shall be effective as of such later Separation Date, *provided* that Employee has not returned to the full time performance of Employee's duties prior to such date;

(v) on the date specified in Employee's written notice of Employee's resignation for Good Reason, provided it is within thirty (30) days after the Cure Period has ended and the Company has failed to remedy any of the reasons for Good Reason set forth in Employee's initial notice under Section 6.3(a); or

(vi) ten (10) days after the Employee gives written notice to the Company of Employee's resignation, *provided* that the Company may set a Separation Date at any time between the date of notice and the date of resignation, in which case the Employee's resignation shall be effective as of such other date. Employee will receive compensation through the Separation Date.

(b) In the event notice of a termination under subsections (a)(iii) and (iv) is given orally, at the other party's request, the party giving notice must provide written confirmation of such notice within five (5) business days of the request in compliance with the requirement of Section 7.1 below. In the event of a termination for Cause, written confirmation shall specify the subsection(s) of the definition of Cause relied on to support the decision to terminate.

6.7 Cooperation With Company After Termination of Employment. Following termination of Employee's employment for any reason, Employee shall reasonably cooperate with the Company in all matters relating to the winding up of Employee's pending work including, but not limited to, any litigation in which the Company is involved, and the orderly transfer of any such pending work to such other Employees as may be designated by the Company.

6.8 Application of Section 409A. Notwithstanding anything to the contrary set forth herein, any payments and benefits provided under this Agreement that constitute "deferred compensation" within the meaning of Section 409A of the Internal Revenue Code of 1986, as amended ("***Code***") and the regulations and other guidance thereunder and any state law of similar effect (collectively, "***Section 409A***") shall not commence in connection with Employee's termination of employment unless and until Employee has also incurred a "separation from service" (as such term is defined in Treasury Regulation Section 1.409A-1(h)) ("***Separation From Service***"), unless the Company reasonably determines that such amounts may be provided to Employee without causing Employee to incur the additional 20% tax under Section 409A. It is intended that each installment of severance pay provided for in this Agreement is a separate "payment" for purposes of Treasury Regulation Section 1.409A-2(b)(2)(i). For the avoidance of doubt, it is intended that severance payments set forth in this Agreement satisfy, to the greatest extent possible, the exceptions from the application of Section 409A provided under Treasury Regulation Sections 1.409A-1(b)(4), 1.409A-1(b)(5), and 1.409A-1(b)(9). If the Company (or, if applicable, the successor entity thereto) determines that any payments or benefits constitute "deferred compensation" under Section 409A and Employee is, on the termination of service, a "specified employee" of the Company or any successor entity thereto, as such term is defined in Section 409A(a)(2)(B)(i) of the Code, then, solely to the extent necessary to avoid the incurrence of the adverse personal tax consequences under Section 409A, the timing of the payments and benefits shall be delayed until the earlier to occur of: (a) the date that is six months and one day after Employee's Separation From Service, or (b) the date of Employee's death (such applicable date, the "***Specified Employee Initial Payment Date***"). On the Specified Employee Initial Payment Date, the Company (or the successor entity thereto, as applicable) shall (i) pay to Employee a lump sum amount equal to the sum of the payments and benefits that Employee would otherwise have received through the Specified Employee Initial Payment Date if the commencement of the payment of such amounts had not been so delayed pursuant to this Section and (ii) commence paying the balance of the payments and benefits in

accordance with the applicable payment schedules set forth in this Agreement. All reimbursements provided under this Agreement shall be subject to the following requirements: (i) the amount of in-kind benefits provided or reimbursable expenses incurred in one taxable year shall not affect the in-kind benefits to be provided or the expenses eligible for reimbursement in any other taxable year, (ii) all reimbursements shall be paid as soon as administratively practicable, but in no event shall any reimbursement be paid after the last day of the taxable year following the taxable year in which the expense was incurred, and (iii) the right to reimbursement or in-kind benefits is not subject to liquidation or exchange for any other benefit. It is intended that all payments and benefits under this Agreement shall either comply with or be exempt from the requirements of Section 409A, and any ambiguity contained herein shall be interpreted in such manner so as to avoid adverse personal tax consequences under Section 409A. Notwithstanding the foregoing, the Company shall in no event be obligated to indemnify the Employee for any taxes or interest that may be assessed by the Internal Revenue Service pursuant to Section 409A of the Code to payments made pursuant to this Agreement.

7. GENERAL PROVISIONS.

7.1 Notices. Any notices required hereunder to be in writing shall be deemed effectively given: (a) upon personal delivery to the party to be notified, (b) when sent by electronic mail, telex or confirmed facsimile if sent during normal business hours of the recipient, and if not, then on the next business day, (c) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (d) one (1) day after deposit with a nationally recognized overnight courier, specifying next day delivery, with written verification of receipt. All communications shall be sent to the Company at its primary office location and to Employee at Employee's address as listed on the Company payroll, or at such other address as the Company or the Employee may designate by ten (10) days advance written notice to the other.

7.2 Severability. Whenever possible, each provision of this Agreement will be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be invalid, illegal or unenforceable in any respect under any applicable law or rule in any jurisdiction, such invalidity, illegality or unenforceability will not affect any other provision or any other jurisdiction, but this Agreement will be reformed, construed and enforced in such jurisdiction as if such invalid, illegal or unenforceable provisions had never been contained herein.

7.3 Waiver. If either party should waive any breach of any provisions of this Agreement, such party shall not thereby be deemed to have waived any preceding or succeeding breach of the same or any other provision of this Agreement.

7.4 Complete Agreement. This Agreement constitutes the entire agreement between Employee and the Company with regard to the subject matter hereof. This Agreement is the complete, final, and exclusive embodiment of their agreement with regard to this subject matter and supersedes any prior oral discussions or written communications and agreements. This Agreement is entered into without reliance on any promise or representation other than those expressly contained herein, and it cannot be modified or amended except in writing signed by Employee and an authorized officer of the Company. The parties have entered into a separate

Proprietary Information Agreement and have or may enter into separate agreement related to stock option awards. These separate agreements govern other aspects of the relationship between the parties, have or may have provisions that survive termination of the Employee's employment under this Agreement, may be amended or superseded by the parties without regard to this Agreement and are enforceable according to their terms without regard to the enforcement provision of this Agreement.

7.5 Counterparts. This Agreement may be executed in separate counterparts, any one of which need not contain signatures of more than one party, but all of which taken together will constitute one and the same Agreement.

7.6 Headings. The headings of the sections hereof are inserted for convenience only and shall not be deemed to constitute a part hereof nor to affect the meaning thereof.

7.7 Successors and Assigns. The Company shall assign this Agreement and its rights and obligations hereunder in whole, but not in part, to any Company or other entity with or into which the Company may hereafter merge or consolidate or to which the Company may transfer all or substantially all of its assets, if in any such case said Company or other entity shall by operation of law or expressly in writing assume all obligations of the Company hereunder as fully as if it had been originally made a party hereto, but may not otherwise assign this Agreement or its rights and obligations hereunder. The Employee may not assign or transfer this Agreement or any rights or obligations hereunder, other than to her estate upon her death.

7.8 Choice of Law. All questions concerning the construction, validity and interpretation of this Agreement will be governed by the law of the Commonwealth of Pennsylvania, without regard to its rules of conflicts or choice of laws.

7.9 Indemnification. The Employee shall be entitled to indemnification to the maximum extent permitted by applicable law and the Company's Bylaws with terms no less favorable than provided to any other Company executive officer and subject to the terms of any separate written indemnification agreement. At all times during the Employee's employment, the Company shall maintain in effect a directors and officers liability insurance policy with the Employee as a covered officer.

7.10 Resolution of Disputes. The parties recognize that litigation in federal or state courts or before federal or state administrative agencies of disputes arising out of the Employee's employment with the Company or out of this Agreement, or the Employee's termination of employment or termination of this Agreement, may not be in the best interests of either the Employee or the Company, and may result in unnecessary costs, delays, complexities, and uncertainty. The parties agree that any dispute between the parties arising out of or relating to the negotiation, execution, performance or termination of this Agreement or the Employee's employment, including, but not limited to, any claim arising out of this Agreement, claims under Title VII of the Civil Rights Act of 1964, as amended, the Civil Rights Act of 1991, the Age Discrimination in Employment Act of 1967, the Americans with Disabilities Act of 1990, Section 1981 of the Civil Rights Act of 1966, as amended, the Family Medical Leave Act, the Employee Retirement Income Security Act, and any similar federal, state or local law, statute,

regulation, or any common law doctrine, whether that dispute arises during or after employment, shall be settled by binding arbitration conducted before a single arbitrator by Judicial Arbitration and Mediation Services, Inc. ("***JAMS***") or its successor, under the then applicable JAMS rules; *provided however,* that this dispute resolution provision shall not apply to any separate agreements between the parties that do not themselves specify arbitration as an exclusive remedy. The location for the arbitration shall be Philadelphia, Pennsylvania. Any award made by such panel shall be final, binding and conclusive on the parties for all purposes, and judgment upon the award rendered by the arbitrators may be entered in any court having jurisdiction thereof. The arbitrators' fees and expenses and all administrative fees and expenses associated with the filing of the arbitration shall be borne by the Company; *provided however*, that at the Employee's option, Employee may voluntarily pay up to one-half the costs and fees, for which Employee shall be reimbursed by the Company. The parties acknowledge and agree that their obligations to arbitrate under this Section survive the termination of this Agreement and continue after the termination of the employment relationship between Employee and the Company. The parties each further agree that the arbitration provisions of this Agreement shall provide each party with its **exclusive remedy**, and each party expressly waives any right it might have to seek redress in any other forum, except as otherwise expressly provided in this Agreement. By election arbitration as the means for final settlement of all claims, **the parties hereby waive their respective rights to, and agree not to, sue each other in any action in a Federal, State or local court with respect to such claims, but may seek to enforce in court an arbitration award rendered pursuant to this Agreement. The parties specifically agree to waive their respective rights to a trial by jury, and further agree that no demand, request or motion will be made for trial by jury.**

IN WITNESS WHEREOF, the parties have executed this Employment Agreement on the day and year first written above.

COMPANY:

Verrica Pharmaceuticals Inc.

By: /s/ Ted White
Name: Ted White
Title: CEO

EMPLOYEE:

/s/ Linda Palczuk
Linda Palczuk

Exhibit A
Release Agreement

This Release Agreement ("***Release***" or "***Agreement***") is made by and between ("you") and . (the "***Company***"). A copy of this Release is an attachment to the Employment Agreement between the Company and you dated , 2018 (the "***Employment Agreement***"). Capitalized terms not defined in this Agreement carry the definition found in the Employment Agreement.

1. Severance Payments; Other Payments.

a. In consideration for your execution, return and non-revocation of this Release on or after your Separation Date, the Company will provide you with the following severance benefits: [to include payment of specific severance payments and COBRA benefits to be paid].

b. In addition, regardless of whether you sign this Agreement, the Company affirms that it will pay the following on the next regularly scheduled date on which payroll is run, as required under Section 6 of the Employment Agreement,: [to include payment of all salary, business expense reimbursements and other amounts due to employee that are not part of the severance].

2. Compliance with Section 409A. The Severance Benefits offered to you by the Company are payable in reliance on Treasury Regulation Section 1.409A-1(b)(9) and the short term deferral exemption in Treasury Regulation Section 1.409A-1(b)(4). For purposes of Code Section 409A, your right to receive any installment payments (whether pay in lieu of notice, Severance Benefits, reimbursements or otherwise) shall be treated as a right to receive a series of separate payments and, accordingly, each installment payment shall at all times be considered a separate and distinct payment. All payments and benefits are subject to applicable withholdings and deductions.

3. Release. In exchange for the Severance Benefits and other consideration, to which you would not otherwise be entitled, and except as otherwise set forth in this Agreement, you, on behalf of yourself and, to the extent permitted by law, on behalf of your spouse, heirs, executors, administrators, assigns, insurers, attorneys and other persons or entities, acting or purporting to act on your behalf (collectively, the "***Employee Parties***"), hereby generally and completely release, acquit and forever discharge the Company, its parents and subsidiaries, and its and their officers, directors, managers, partners, agents, representatives, employees, attorneys, shareholders, predecessors, successors, assigns, insurers and affiliates (the "***Company Parties***") of and from any and all claims, liabilities, demands, contentions, actions, causes of action, suits, costs, expenses, attorneys' fees, damages, indemnities, debts, judgments, levies, executions and obligations of every kind and nature, in law, equity, or otherwise, both known and unknown, suspected and unsuspected, disclosed and undisclosed, arising out of or in any way related to my employment with the Company and separation therefrom, arising at any time prior to and including the execution date of this Agreement, including but not limited to: all such claims and demands directly or indirectly arising out of or in any way connected with your employment with the Company or the termination of that employment; claims or demands related to salary, bonuses, commissions, vacation pay, the right to receive additional grants of stock, stock options or other ownership interests in the Company, fringe benefits, expense reimbursements, severance pay, or any other form of compensation; claims pursuant to any federal, state or local law, statute, or cause of action; tort law; or contract law (individually a "***Claim***" and collectively "***Claims***"). The Claims you are releasing and waiving in this Agreement include, but are not limited to, any and all Claims that any of the Company Parties:

- has violated its personnel policies, handbooks, contracts of employment, or covenants of good faith and fair dealing;
- has discriminated against you on the basis of age, race, color, sex (including sexual harassment), national origin, ancestry, disability, religion, sexual orientation, marital status, parental status, source of income, entitlement to benefits, any union activities or other protected category in violation of any local, state or federal law, constitution, ordinance, or regulation, including but not limited to: the Age Discrimination in Employment Act, as amended ("***ADEA***"); Title VII of the

Civil Rights Act of 1964, as amended; the Civil Rights Act of 1991; 42 U.S.C. § 1981, as amended; the Equal Pay Act; the Americans With Disabilities Act; the Genetic Information Nondiscrimination Act; the Family and Medical Leave Act; the Employee Retirement Income Security Act; the Employee Polygraph Protection Act; the Worker Adjustment and Retraining Notification Act; the Older Workers Benefit Protection Act; the anti-retaliation provisions of the Sarbanes-Oxley Act, or any other federal or state law regarding whistleblower retaliation; the Lilly Ledbetter Fair Pay Act; the Uniformed Services Employment and Reemployment Rights Act; the Fair Credit Reporting Act; and the National Labor Relations Act; and

- has violated any statute, public policy or common law (including, but not limited to, Claims for retaliatory discharge; negligent hiring, retention or supervision; defamation; intentional or negligent infliction of emotional distress and/or mental anguish; intentional interference with contract; negligence; detrimental reliance; loss of consortium to you or any member of your family and/or promissory estoppel).

Notwithstanding the foregoing, other than events expressly contemplated by this Agreement you do not waive or release rights or Claims that may arise: (i) from events that occur after the date this Release is executed; (ii) that relate to a breach of this Agreement; (iii) that relate to any existing ownership interest in the Company as of the date this Release is executed; (iv) that relate to my existing rights under any Company benefit plan or any plan or agreement related to equity ownership in the Company that arise after this Release is executed; and (v) any Claims which cannot be waived by law, including, without limitation, any rights you may have under applicable workers' compensation laws. Nothing in this Agreement shall prevent you from filing, cooperating with, or participating in any proceeding or investigation before the Equal Employment Opportunity Commission, United States Department of Labor, the National Labor Relations Board, the Occupational Safety and Health Administration, the Securities and Exchange Commission or any other federal government agency, or similar state or local agency ("***Government Agencies***"), or exercising any rights pursuant to Section 7 of the National Labor Relations Act. You further understand this Agreement does not limit your ability to voluntarily communicate with any Government Agencies or otherwise participate in any investigation or proceeding that may be conducted by any Government Agency, including providing documents or other information, without notice to the Company. While this Agreement does not limit your right to receive an award for information provided to the Securities and Exchange Commission, you understand and agree that, you are otherwise waiving, to the fullest extent permitted by law, any and all rights you may have to individual relief based on any Claims that you have released and any rights you have waived by signing this Agreement. If any Claim is not subject to release, to the extent permitted by law, you waive any right or ability to be a class or collective action representative or to otherwise participate in any putative or certified class, collective or multi-party action or proceeding based on such a Claim in which any of the Company Parties is a party.

4. Your Acknowledgments and Affirmations. You also acknowledge and agree that (i) the consideration given to you in exchange for the waiver and release in this Agreement is in addition to anything of value to which you were already entitled, and (ii) that you have been paid for all time worked, have received all the leave, leaves of absence and leave benefits and protections for which you are eligible, and have not suffered any on-the-job injury for which you have not already filed a Claim. You affirm that all of the decisions of the Company Parties regarding your pay and benefits through the date of your execution of this Agreement were not discriminatory based on age, disability, race, color, sex, religion, national origin or any other classification protected by law. You affirm that you have not filed or caused to be filed, and are not presently a party to, a Claim against any of the Company Parties. You further affirm that you have no known workplace injuries or occupational diseases. You acknowledge and affirm that you have not been retaliated against for reporting any allegation of corporate fraud or other wrongdoing by any of the Company Parties, or for exercising any rights protected by law, including any rights protected by the Fair Labor Standards Act, the Family Medical Leave Act or any related statute or local leave or disability accommodation laws, or any applicable state workers' compensation law. In addition, you acknowledge that you are knowingly and voluntarily waiving and releasing any rights you may have under the ADEA ("**ADEA Waiver**"). You also acknowledge that the consideration given for the ADEA Waiver is in addition to anything of value to which you were already entitled. You further acknowledge that you have been advised by this writing, as required by the ADEA, that: (a) your release and waiver herein does not apply to any rights or claims that arise after the date you sign this Agreement; (b) you should consult with an attorney prior to signing this Agreement; (c) you have twenty-one (21) days to consider this Agreement (although you may choose to voluntarily sign it sooner); (d) you have seven (7) days following the date you sign this Agreement to revoke it (by sending written revocation directly to [ ]; and (e) the Agreement will not be effective until the date upon which the revocation period has expired unexercised, which will be the eighth (8th) day after you sign this Agreement.

5. **Return of Company Property**. By the Separation Date, you agree to return to the Company all Company documents (and all copies thereof) and other Company property that you have had in your possession at any time, including, but not limited to, Company files, notes, drawings, records, business plans and forecasts, financial information, specifications, computer-recorded information, tangible property (including, but not limited to, computers), credit cards, entry cards, identification badges and keys; and, any materials of any kind that contain or embody any proprietary or confidential information of the Company (and all reproductions thereof). Please coordinate return of Company property with [ ]. **Receipt of the Severance Benefits described in Section 1 of this Agreement is expressly conditioned upon return of all Company property.**

6. Confidential Information, Non-Competition and Non-Solicitation Obligations. Both during and after your employment you acknowledge your continuing obligations under your Proprietary Information, Inventions, Non-competition and Non-Solicitation Agreement not to use or disclose any confidential or proprietary information of the Company and comply with your post-employment non-competition and non-solicitation restrictions. The Company acknowledges that you will not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that: (A) is made (i) in confidence to a federal, state, or local government official, either directly or indirectly, or to an attorney and (ii) solely for the purpose of reporting or investigating a suspected violation of law; or (B) is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal. In addition, in the event that you file a lawsuit for retaliation by the Company for reporting a suspected violation of law, you may disclose the trade secret to your attorney and use the trade secret information in the court proceeding, if you: (A) file any document containing the trade secret under seal; and (B) do not disclose the trade secret, except pursuant to court order.

7. Confidentiality. The provisions of this Agreement will be held in strictest confidence by you and will not be publicized or disclosed in any manner whatsoever; *provided, however*, that: (a) you may disclose this Agreement to your immediate family; (b) you may disclose this Agreement in confidence to your attorney, accountant, auditor, tax preparer, and financial advisor; and (c) you may disclose this Agreement insofar as such disclosure may be required by law. Notwithstanding the foregoing, nothing in this Agreement shall limit your right to discuss your employment with the Equal Employment Opportunity Commission, United States Department of Labor, the National Labor Relations Board, other federal government agency or similar state or local agency or to discuss the terms and conditions of your employment with others to the extent expressly permitted by Section 7 of the National Labor Relations Act.

8. Non-Disparagement. You and the Company agree not to disparage each other, and the other's attorneys, directors, managers, partners, employees, agents and affiliates, in any manner likely to be harmful to them or their business, business reputation or personal reputation; provided that you and the Company will respond accurately and fully to any question, inquiry or request for information when required by legal process. For purposes of this Section 8, the obligations of the Company shall apply only to the senior management team and the members of the Board of Directors. Notwithstanding the foregoing, nothing in this Agreement shall limit your right to voluntarily communicate with the Equal Employment Opportunity Commission, United States Department of Labor, the National Labor Relations Board, other federal government agency or similar state or local agency or to discuss the terms and conditions of your employment with others to the extent expressly permitted by Section 7 of the National Labor Relations Act.

9. No Admission. This Agreement does not constitute an admission by you or by the Company of any wrongful action or violation of any federal, state, or local statute, or common law rights, including those relating to the provisions of any law or statute concerning employment actions, or of any other possible or claimed violation of law or rights.

10. Breach. You agree that upon any material breach of this Agreement you will forfeit all amounts paid or owing to you under this Agreement. Further, you acknowledge that it may be impossible to assess the damages caused by your violation of the terms of Sections 5, 6, 7 and 8 of this Agreement and further agree that any threatened or actual violation or breach of those Sections of this Agreement will constitute immediate and irreparable injury to the Company. You therefore agree that, in addition to any and all other damages and remedies available to the Company upon your breach of this Agreement, the Company shall be entitled to an injunction to prevent you from violating or breaching this Agreement.

11. Miscellaneous. This Agreement is entered into without reliance on any promise or representation, written or oral, other than those expressly contained herein, and it supersedes any other such promises, warranties or representations. This Agreement may not be modified or amended except in a writing signed by both you and a duly authorized officer of the Company. This Agreement will bind the heirs, personal representatives, successors and assigns of both you and the Company, and inure to the benefit of both you and the Company, their heirs, successors and assigns. If any provision of this Agreement is determined to be invalid or unenforceable, in whole or in part, this determination will not affect any other provision of this Agreement and the provision in question will be modified by the court so as to be rendered enforceable. This Agreement will be deemed to have been entered into and will be construed and enforced in accordance with the laws of the Commonwealth of Pennsylvania as applied to contracts made and to be performed entirely within the Commonwealth of Pennsylvania.

VERRICA PHARMACEUTICALS INC.

By: _____
Name:
Title:

_____
Linda Palczuk

AMENDMENT TO EMPLOYMENT AGREEMENT

This Amendment to Employment Agreement (this "***Amendment***"), dated as of February 13, 2018, is made by and between Verrica Pharmaceuticals Inc., a Delaware corporation (the "***Company***"), and Linda S. Palczuk ("***Employee***").

BACKGROUND

A. The Company and Employee executed an Employment Agreement on January 30, 2018 (the "***Agreement***").

B. The Company and Consultant desire to amend the Agreement, as set forth herein.

AGREEMENT

NOW, THEREFORE, in consideration of the mutual covenants and agreements contained in this Amendment and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned agree as follows:

1. Employee Start Date. The Company and Employee agree that the Employee's employment start date shall be February 26, 2018.

2. Amendments. The Company and Employee agree that the Agreement shall be amended as follows:

a. The preamble of the Agreement is hereby amended to insert "February 26" into the highlighted space.

b. Section 2.3(b) of the Agreement is hereby amended to insert "February 26" into the highlighted space.

c. Section 6.1(f) of the Agreement is hereby amended to insert "February 26" into each of the highlighted spaces in such subsection.

3. Acknowledgement. The Company and Employee acknowledge and agree that the signature page to the Agreement that was executed by the parties reflected an incorrect page number due to a word processing printing error. The signature page to the Agreement should have been numbered as page 13 instead of page 14.

4. Effect of Amendment. Except as otherwise provided herein, all of the provisions of the Agreement are hereby ratified and confirmed and all the terms, conditions and provisions thereof remain in full force and effect.

[Signature Page to Follow]

IN WITNESS WHEREOF, the undersigned have executed this Amendment to Employment Agreement as of the date first set forth above.

COMPANY:

VERRICA PHARMACEUTICALS INC.

By: /s/ Ted White
Name: Ted White
Title: CEO

EMPLOYEE:

/s/ Linda Palczuk
Name: Linda S. Palczuk

EXHIBIT 10.10

EMPLOYMENT AGREEMENT

This **EMPLOYMENT AGREEMENT** (the "***Agreement***") is entered into effective January 6th, 2018 (the "***Effective Date***"), by and between Verrica Pharmaceuticals Inc., a Delaware corporation (the "***Company***") and Joseph Bonaccorso (the "***Employee***").

The Company desires to employ the Employee in the capacity of full-time Chief Commercial Officer pursuant to the terms of this Agreement and, in connection therewith, to compensate the Employee for Employee's personal services to the Company; and

The Employee wishes to be employed by the Company and provide personal services to the Company in return for certain compensation.

Accordingly, in consideration of the mutual promises and covenants contained herein, the parties agree to the following:

1. EMPLOYMENT BY THE COMPANY.

1.1 At-Will Employment. Employee shall be employed by the Company on an "at-will" basis, meaning either the Company or Employee may terminate Employee's employment at any time, with or without cause or advanced notice. Any contrary representations that may have been made to Employee shall be superseded by this Agreement. This Agreement shall constitute the full and complete agreement between Employee and the Company on the "at-will" nature of Employee's employment with the Company, which may be changed only in an express written agreement signed by Employee and a duly authorized officer of the Company. Employee's rights to any compensation following a termination shall be only as set forth in Section 6.

1.2 Position. Subject to the terms set forth herein, the Company agrees to employ Employee, initially, in the position of Chief Commercial Officer and Employee hereby accepts such employment. During the term of Employee's employment with the Company, Employee will devote Employee's best efforts and substantially all of Employee's business time and attention to the business of the Company.

1.3 Duties. Employee will report to the Board of Directors ("***Board***") of the Company, performing such duties as are normally associated with his position and such duties as are assigned to him from time to time, subject to the oversight and direction of the Board. Employee shall perform his duties under this Agreement principally out of the Company's corporate headquarters to be established within twenty-five (25) miles of West Chester, Pennsylvania or such other location as assigned. In addition, the Employee shall make such business trips to such places as may be necessary or advisable for the efficient operations of the Company.

1.4 Company Policies and Benefits. The employment relationship between the parties shall also be subject to the Company's personnel policies and procedures as they may be interpreted, adopted, revised or deleted from time to time in the Company's sole discretion. The Employee will be eligible to participate on the same basis as similarly situated employees in the Company's benefit plans in effect from time to time during his employment. All matters of eligibility for coverage or benefits under any benefit plan shall be determined in accordance with the provisions of such plan. The Company reserves the right to change, alter, or terminate any benefit plan in its sole discretion. Notwithstanding the foregoing, in the event that the terms of this Agreement differ from or are in conflict with the Company's general employment policies or practices, this Agreement shall control.

1.5 Paid Time Off. The Employee will be eligible for up to fifteen (15) days of paid time off per calendar year in accordance with any paid leave policy adopted by the Company from time to time.

2. COMPENSATION.

2.1 Salary. Employee shall receive for Employee's services to be rendered hereunder an initial annualized base salary of $350,000 per year, subject to review and adjustment from time to time by the Company in its sole discretion, payable subject to standard federal and state payroll withholding requirements in accordance with Company's standard payroll practices ("***Base Salary***").

2.2 Bonus.

(a) **During Employment**. Employee shall be eligible to earn an annual performance bonus of up to 40% of his Base Salary ("***Annual Bonus***"). The Annual Bonus will be based upon the Board's assessment of the Employee's performance and the Company's attainment of targeted goals as set by the Board in its sole discretion. The Annual Bonus, if any, will be subject to applicable payroll deductions and withholdings. Following the close of each calendar year, the Board will determine whether the Employee has earned the Annual Bonus, and the amount of any Annual Bonus, based on the set criteria. No amount of the Annual Bonus is guaranteed, and the Employee must be an employee in good standing on the Annual Bonus payment date to be eligible to receive an Annual Bonus; no partial or prorated bonuses will be provided. The Annual Bonus, if earned, will be paid no later than March 15 of the calendar year immediately following the applicable calendar year for which the Annual Bonus is being measured. The Employee's eligibility for an Annual Bonus is subject to change in the discretion of the Board (or any authorized committee thereof).

(b) **Upon Termination**. In the event Employee leaves the employ of the Company for any reason prior to payment of any bonus, he is not eligible for such bonus, prorated or otherwise.

2.3 Expense Reimbursement. The Company will reimburse Employee for all reasonable, documented business expenses incurred in connection with his services hereunder, in accordance with the Company's business expense reimbursement policies and procedures as may be in effect from time to time.

3. CONFIDENTIAL INFORMATION, INVENTIONS, NON-SOLICITATION AND NON-COMPETITION OBLIGATIONS. The parties hereto have entered into a Confidential Information, Inventions, Non-Solicitation and Non-Competition Agreement (the "***Proprietary Information Agreement***"), which may be amended by the parties from time to time without regard to this Agreement. The Proprietary Information Agreement contains provisions that are intended by the parties to survive and do survive termination or expiration of this Agreement.

4. OUTSIDE ACTIVITIES. Except with the prior written consent of the Company's Board, Employee will not, while employed by the Company, undertake or engage in any other employment, occupation or business enterprise that would interfere with Employee's responsibilities and the performance of Employee's duties hereunder except for (i) reasonable time devoted to volunteer services for or on behalf of such religious, educational, non-profit and/or other charitable organization as Employee may wish to serve; (ii) reasonable time devoted to activities in the non-profit and business communities consistent with Employee's duties; (iii) reasonable time devoted to service on boards of directors of companies that are not competitive with the Company, do not otherwise present a conflict of interest and would not otherwise interfere with Employee's responsibilities and the performance of Employee's duties hereunder, subject to the prior written approval of the Board (which approval shall not be unreasonably withheld); and (iv) such other activities that would not interfere with Employee's responsibilities and the performance of Employee's duties hereunder as may be specifically approved by the Board (which approval shall not be unreasonably withheld). This restriction shall not, however, preclude the Employee from owning less than one percent (1%) of the total outstanding shares of a publicly traded company.

5. NO CONFLICT WITH EXISTING OBLIGATIONS. Employee represents that Employee's performance of all the terms of this Agreement and as an Employee of the Company do not and will not breach any agreement or obligation of any kind made prior to Employee's employment by the Company, including agreements or obligations Employee may have with prior employers or entities for which Employee has provided services. Employee has not entered into, and Employee agrees that Employee will not enter into, any agreement or obligation, either written or oral, in conflict herewith.

6. TERMINATION OF EMPLOYMENT. The parties acknowledge that Employee's employment relationship with the Company is at-will. Either Employee or the Company may terminate the employment relationship at any time, with or without Cause. The provisions in this Section govern the amount of compensation, if any, to be provided to Employee upon termination of employment and do not alter this at-will status.

6.1 Termination by the Company Without Cause.

(a) The Company shall have the right to terminate Employee's employment with the Company pursuant to this Section 6.1 at any time without "Cause" (as defined in Section 6.2(a) below) by giving notice as described in Section 6.6 of this Agreement. A termination pursuant to Section 6.5 below is not a termination without "Cause" for purposes of receiving the benefits described in this Section 6.1.

(b) In the event Employee's employment is terminated without Cause, then provided that the Employee executes and does not revoke a separation agreement that includes a general release substantially in the form attached hereto as **Exhibit A** (the "***Release***"), and subject to Section 6.1(c) (the date that the Release becomes effective and may no longer be revoked by the Employee is referred to as the "***Release Date***"), then:

(i) the Company shall pay to Employee an amount equal to Employee's then current Base Salary for the Severance Period (as defined below), less applicable withholdings and deductions (the "***Severance Payment***"), in installments in accordance with the Company's ordinary payroll practices commencing on the Company's first regular payroll date that is more than sixty (60) days following the Separation Date (as defined below), and shall be for any accrued Base Salary for the sixty (60) day period plus the period from the sixtieth (60^{th}) day until the regular payroll date, if applicable, and all salary continuation payments thereafter, if any, shall be made on the Company's regular payroll dates; and

(ii) if the Employee timely elects continued coverage under COBRA for himself and his covered dependents under the Company's group health plans following such termination, then the Employee will be entitled to the following COBRA benefits (the "***COBRA Benefits***," together with the Severance Payment, the "***Severance Benefits***"**)**: the Company shall pay the COBRA premiums necessary to continue the Employee's and his covered dependents' health insurance coverage in effect for himself (and his covered dependents) on the termination date until the earliest of (x) a number of months following the termination date equal to the Severance Period (the "***COBRA Severance Period***"); (y) the date when the Employee becomes eligible for health insurance coverage in connection with new employment or self-employment; or (iii) the date the Employee ceases to be eligible for COBRA continuation coverage for any reason, including plan termination (such period from the termination date through the earlier of (i)-(iii), the "***COBRA Payment Period***"). Notwithstanding the foregoing, if at any time the Company determines that its payment of COBRA premiums on the Employee's behalf would result in a violation of applicable law (including but not limited to the 2010 Patient Protection and Affordable Care Act, as amended by the 2010 Health Care and Education Reconciliation Act), then in lieu of paying COBRA premiums pursuant to this Section, the Company shall pay the Employee on the last day of each remaining month of the COBRA Payment Period, a fully taxable cash payment equal to the COBRA premium for such month, subject to applicable tax withholding (such amount, the "***Special Severance Payment***"), such Special Severance Payment to be made without regard to the Employee's payment of COBRA premiums and without regard to the expiration of the COBRA period prior to the end of the COBRA Payment Period. Nothing in this Agreement shall deprive the Employee of his rights under COBRA or ERISA for benefits under plans and policies arising under his employment by the Company.

(c) Employee shall not receive the Severance Benefits pursuant to Section 6.1(b) unless he executes the Release within the consideration period specified therein, which shall in no event be more than sixty (60) days, and until the Release becomes effective and can no longer be revoked by Employee under its terms. Employee's ability to receive benefits pursuant to Section 6.1(b) is further conditioned upon his: returning all Company property; complying with his post-termination obligations under this Agreement and the Proprietary Information Agreement; and complying with the Release including without limitation any non-disparagement and confidentiality provisions contained therein.

(d) The benefits provided to Employee pursuant to this Section 6.1 are in lieu of, and not in addition to, any benefits to which Employee may otherwise be entitled under any Company severance plan, policy or program.

(e) The damages caused by the termination of Employee's employment without Cause would be difficult to ascertain; therefore, the severance for which Employee is eligible pursuant to Section 6.1(b) above in exchange for the Release is agreed to by the parties as liquidated damages, to serve as full compensation, and not a penalty.

(f) For purposes of this Agreement, "***Severance Period***" shall mean (i) zero (0) months in the event a termination under this Section 6.1 or under Section 6.3 (an "***Involuntary Termination***") occurs on or before January , 2019 (ii) six (6) months in the event an Involuntary Termination occurs after January , 2019 and on or before January , 2020, and (iii) twelve (12) months in the event an Involuntary Termination occurs after January , 2020.

6.2 Termination by the Company for Cause. Subject to Section 6.2(b) below, the Company shall have the right to terminate Employee's employment with the Company at any time for Cause by giving notice as described in this Section 6.2 and in Section 6.6 of this Agreement.

(a) "***Cause***" for termination shall mean the occurrence of any of the following: (i) Employee's conviction of any felony or any crime involving fraud or dishonesty; (ii) Employee's participation in a fraud, act of dishonesty or other act of gross misconduct that adversely affects the Company; (iii) conduct by Employee that demonstrates Employee's gross unfitness to serve under circumstances that materially and adversely affect the Company; (iv) Employee's violation of any statutory or fiduciary duty, or duty of loyalty, owed to the Company; (v) Employee's breach of any material term of any contract between such Employee and the Company; and/or (vi) Employee's serious violation of a material Company policy. Whether a termination is for Cause shall be decided by the Board in its sole and exclusive judgment and discretion. Prior to termination for Cause pursuant to each event listed in (iii) and (iv) above, the Company shall give the Employee notice of such event(s), which notice shall specify in reasonable detail the circumstances constituting Cause, and an opportunity to explain the circumstances. Prior to any termination for Cause pursuant to each event listed in (v) and (vi) above, to the extent such event(s) is (are) capable of being cured by Employee, (A) the Company shall give the Employee notice of such event(s), which notice shall specify in reasonable detail the circumstances constituting Cause, and an opportunity to cure, and (B) there shall be no Cause with respect to any such event(s) if the Board determines in good faith that such events have been cured by Employee within fifteen (15) days after the delivery of such notice.

(b) In the event Employee's employment is terminated at any time for Cause, Employee will not receive the Severance Benefits described in Section 6.1(b), or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall pay to Employee the accrued but unpaid salary of Employee through the date of termination, together with all compensation and benefits payable to Employee based on his participation in any compensation or benefit plan, program or arrangement through the date of termination.

6.3 Resignation by the Employee With Good Reason.

(a) Employee may resign from Employee's employment with the Company for Good Reason by giving notice following the end of the Cure Period (as defined in this Section). For purposes of this Agreement, "***Good Reason***" for the Employee to terminate his employment hereunder shall mean any of following actions are taken by the Company without Employee's prior written consent: (i) a material reduction by the Company of Employee's Base Salary as initially set forth herein or as the same may be increased from time to time, provided, however, that if such reduction occurs in connection with a Company-wide decrease in executive team compensation, such reduction shall not constitute Good Reason; (ii) a material breach of this Agreement by the Company; (iii) the relocation of Employee's principal place of employment, without Employee's consent, by fifty (50) or more miles from his then-current principal place of employment immediately prior to such relocation; or (iv) a material reduction in Employee's title, duties, authority, or responsibilities relative to Employee's title, duties, authority, or responsibilities in effect immediately prior to such reduction; *provided, however*, that, any such termination by Employee shall only be deemed for Good Reason pursuant to this definition if: (1) Employee gives the Company written notice of his intent to terminate for Good Reason within thirty (30) days following the occurrence of the condition(s) that he believes constitute(s) Good Reason, which notice shall describe such condition(s); (2) the Company fails to remedy such condition(s) within thirty (30) days following receipt of the written notice (the "***Cure Period***"); and (3) Employee voluntarily terminates his employment within thirty (30) days following the end of the Cure Period.

(b) In the event Employee resigns from employment for Good Reason, then provided that the Employee executes and does not revoke the Release and subject to Section 6.1(c), then the Company shall pay to Employee the Severance Benefits described in Section 6.1(b).

6.4 Resignation by the Employee Without Good Reason.

(a) Employee may resign from Employee's employment with the Company at any time by giving notice as described in Section 6.6.

(b) In the event Employee resigns from Employee's employment with the Company other than for Good Reason, Employee will not receive the Severance Benefits, or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall pay to Employee the accrued but unpaid salary of Employee through the date of resignation, together with all compensation and benefits payable to Employee through the date of resignation under any compensation or benefit plan, program or arrangement during such period and Employee shall be eligible for any benefit continuation or conversion rights provided by the provisions of a benefit plan or by law.

6.5 Termination by Virtue of Death or Disability of the Employee.

(a) In the event of Employee's death while employed pursuant to this Agreement, all obligations of the parties hereunder shall terminate immediately, and the Company shall, pursuant to the Company's standard payroll policies, pay to the Employee's legal representatives Employee's accrued but unpaid salary through the date of death together with all compensation and benefits payable to Employee based on his participation in any compensation or benefit plan, program or arrangement through the date of termination.

(b) Subject to applicable state and federal law, the Company shall at all times have the right, upon written notice to the Employee, to terminate this Agreement based on the Employee's Disability (as defined below). Termination by the Company of the Employee's employment based on "***Disability***" shall mean termination because the Employee is unable due to a physical or mental condition to perform the essential functions of his position with or without reasonable accommodation for six (6) months in the aggregate during any twelve (12) month period or based on the written certification by two licensed physicians of the likely continuation of such condition for such period. This definition shall be interpreted and applied consistent with the Americans with Disabilities Act, the Family and Medical Leave Act, and other applicable law. In the event Employee's employment is terminated based on the Employee's Disability, Employee will not receive the Severance Benefits, or any other severance compensation or benefit, except that, pursuant to the Company's standard payroll policies, the Company shall pay to Employee the accrued but unpaid salary of Employee through the date of termination, together with all compensation and benefits payable to Employee based on his participation in any compensation or benefit plan, program or arrangement through the date of termination.

6.6 Notice; Effective Date of Termination.

(a) Termination of Employee's employment (the "***Separation Date***") pursuant to this Agreement shall be effective as follows:

(i) ten (10) days after the Company has provided Employee with written notice of Employee's termination without Cause under Section 6.1;

(ii) For a termination for Cause: (aa) under Section 6.2(a)(i) or 6.2(a)(ii), immediately upon provision by the Company of written notice of the reasons to Employee; (bb) under Section 6.2(a)(iii) or 6.2(a)(iv), following the required written notice to Employee and expiration of the period during which Employee may explain; (cc) under Section 6.2(a)(v) or 6.2(a)(vi), following the required written notice to Employee and expiration of the 15-day cure period, if Employee has not cured;

(iii) immediately upon the Employee's death;

(iv) thirty (30) days after the Company gives notice to Employee of Employee's termination on account of Employee's Disability under Section 6.5, unless the Company specifies a later Separation Date, in which case, termination shall be effective as of such later Separation Date, *provided* that Employee has not returned to the full time performance of Employee's duties prior to such date;

(v) on the date specified in Employee's written notice of Employee's resignation for Good Reason, provided it is within thirty (30) days after the Cure Period has ended and the Company has failed to remedy any of the reasons for Good Reason set forth in Employee's initial notice under Section 6.3(a); or

(vi) ten (10) days after the Employee gives written notice to the Company of Employee's resignation, *provided* that the Company may set a Separation Date at any time between the date of notice and the date of resignation, in which case the Employee's resignation shall be effective as of such other date. Employee will receive compensation through the Separation Date.

(b) In the event notice of a termination under subsections (a)(iii) and (iv) is given orally, at the other party's request, the party giving notice must provide written confirmation of such notice within five (5) business days of the request in compliance with the requirement of Section 7.1 below. In the event of a termination for Cause, written confirmation shall specify the subsection(s) of the definition of Cause relied on to support the decision to terminate.

6.7 Cooperation With Company After Termination of Employment. Following termination of Employee's employment for any reason, Employee shall reasonably cooperate with the Company in all matters relating to the winding up of Employee's pending work including, but not limited to, any litigation in which the Company is involved, and the orderly transfer of any such pending work to such other Employees as may be designated by the Company.

6.8 Application of Section 409A. Notwithstanding anything to the contrary set forth herein, any payments and benefits provided under this Agreement that constitute "deferred compensation" within the meaning of Section 409A of the Internal Revenue Code of 1986, as amended ("***Code***") and the regulations and other guidance thereunder and any state law of similar effect (collectively, "***Section 409A***") shall not commence in connection with Employee's termination of employment unless and until Employee has also incurred a "separation from service" (as such term is defined in Treasury Regulation Section 1.409A-1(h)) ("***Separation From Service***"), unless the Company reasonably determines that such amounts may be provided to Employee without causing Employee to incur the additional 20% tax under Section 409A. It is intended that each installment of severance pay provided for in this Agreement is a separate "payment" for purposes of Treasury Regulation Section 1.409A-2(b)(2)(i). For the avoidance of doubt, it is intended that severance payments set forth in this Agreement satisfy, to the greatest extent possible, the exceptions from the application of Section 409A provided under Treasury Regulation Sections 1.409A-1(b)(4), 1.409A-1(b)(5), and 1.409A-1(b)(9). If the Company (or, if applicable, the successor entity thereto) determines that any payments or benefits constitute "deferred compensation" under Section 409A and Employee is, on the termination of service, a "specified employee" of the Company or any successor entity thereto, as such term is defined in Section 409A(a)(2)(B)(i) of the Code, then, solely to the extent necessary to avoid the incurrence of the adverse personal tax consequences under Section 409A, the timing of the payments and benefits shall be delayed until the earlier to occur of: (a) the date that is six months and one day after Employee's Separation From Service, or (b) the date of Employee's death (such applicable date, the "***Specified Employee Initial Payment Date***"). On

the Specified Employee Initial Payment Date, the Company (or the successor entity thereto, as applicable) shall (i) pay to Employee a lump sum amount equal to the sum of the payments and benefits that Employee would otherwise have received through the Specified Employee Initial Payment Date if the commencement of the payment of such amounts had not been so delayed pursuant to this Section and (ii) commence paying the balance of the payments and benefits in accordance with the applicable payment schedules set forth in this Agreement. All reimbursements provided under this Agreement shall be subject to the following requirements: (i) the amount of in-kind benefits provided or reimbursable expenses incurred in one taxable year shall not affect the in-kind benefits to be provided or the expenses eligible for reimbursement in any other taxable year, (ii) all reimbursements shall be paid as soon as administratively practicable, but in no event shall any reimbursement be paid after the last day of the taxable year following the taxable year in which the expense was incurred, and (iii) the right to reimbursement or in-kind benefits is not subject to liquidation or exchange for any other benefit. It is intended that all payments and benefits under this Agreement shall either comply with or be exempt from the requirements of Section 409A, and any ambiguity contained herein shall be interpreted in such manner so as to avoid adverse personal tax consequences under Section 409A. Notwithstanding the foregoing, the Company shall in no event be obligated to indemnify the Employee for any taxes or interest that may be assessed by the Internal Revenue Service pursuant to Section 409A of the Code to payments made pursuant to this Agreement.

7. GENERAL PROVISIONS.

7.1 Notices. Any notices required hereunder to be in writing shall be deemed effectively given: (a) upon personal delivery to the party to be notified, (b) when sent by electronic mail, telex or confirmed facsimile if sent during normal business hours of the recipient, and if not, then on the next business day, (c) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (d) one (1) day after deposit with a nationally recognized overnight courier, specifying next day delivery, with written verification of receipt. All communications shall be sent to the Company at its primary office location and to Employee at Employee's address as listed on the Company payroll, or at such other address as the Company or the Employee may designate by ten (10) days advance written notice to the other.

7.2 Severability. Whenever possible, each provision of this Agreement will be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be invalid, illegal or unenforceable in any respect under any applicable law or rule in any jurisdiction, such invalidity, illegality or unenforceability will not affect any other provision or any other jurisdiction, but this Agreement will be reformed, construed and enforced in such jurisdiction as if such invalid, illegal or unenforceable provisions had never been contained herein.

7.3 Waiver. If either party should waive any breach of any provisions of this Agreement, such party shall not thereby be deemed to have waived any preceding or succeeding breach of the same or any other provision of this Agreement.

7.4 Complete Agreement. This Agreement constitutes the entire agreement between Employee and the Company with regard to the subject matter hereof. This Agreement is the complete, final, and exclusive embodiment of their agreement with regard to this subject matter and supersedes any prior oral discussions or written communications and agreements. This Agreement is entered into without reliance on any promise or representation other than those expressly contained herein, and it cannot be modified or amended except in writing signed by Employee and an authorized officer of the Company. The parties have entered into a separate Proprietary Information Agreement. These separate agreements govern other aspects of the relationship between the parties, have or may have provisions that survive termination of the Employee's employment under this Agreement, may be amended or superseded by the parties without regard to this Agreement and are enforceable according to their terms without regard to the enforcement provision of this Agreement.

7.5 Counterparts. This Agreement may be executed in separate counterparts, any one of which need not contain signatures of more than one party, but all of which taken together will constitute one and the same Agreement.

7.6 Headings. The headings of the sections hereof are inserted for convenience only and shall not be deemed to constitute a part hereof nor to affect the meaning thereof.

7.7 Successors and Assigns. The Company shall assign this Agreement and its rights and obligations hereunder in whole, but not in part, to any Company or other entity with or into which the Company may hereafter merge or consolidate or to which the Company may transfer all or substantially all of its assets, if in any such case said Company or other entity shall by operation of law or expressly in writing assume all obligations of the Company hereunder as fully as if it had been originally made a party hereto, but may not otherwise assign this Agreement or its rights and obligations hereunder. The Employee may not assign or transfer this Agreement or any rights or obligations hereunder, other than to his estate upon his death.

7.8 Choice of Law. All questions concerning the construction, validity and interpretation of this Agreement will be governed by the law of the Commonwealth of Pennsylvania, without regard to its rules of conflicts or choice of laws.

7.9 Indemnification. The Employee shall be entitled to indemnification to the maximum extent permitted by applicable law and the Company's Bylaws with terms no less favorable than provided to any other Company executive officer and subject to the terms of any separate written indemnification agreement. At all times during the Employee's employment, the Company shall maintain in effect a directors and officers liability insurance policy with the Employee as a covered officer.

7.10 Resolution of Disputes. The parties recognize that litigation in federal or state courts or before federal or state administrative agencies of disputes arising out of the Employee's employment with the Company or out of this Agreement, or the Employee's termination of employment or termination of this Agreement, may not be in the best interests of either the Employee or the Company, and may result in unnecessary costs, delays, complexities, and uncertainty. The parties agree that any dispute between the parties arising out of or relating to the negotiation, execution, performance or termination of this Agreement or the Employee's employment, including, but not limited to, any claim arising out of this Agreement, claims under

Title VII of the Civil Rights Act of 1964, as amended, the Civil Rights Act of 1991, the Age Discrimination in Employment Act of 1967, the Americans with Disabilities Act of 1990, Section 1981 of the Civil Rights Act of 1966, as amended, the Family Medical Leave Act, the Employee Retirement Income Security Act, and any similar federal, state or local law, statute, regulation, or any common law doctrine, whether that dispute arises during or after employment, shall be settled by binding arbitration conducted before a single arbitrator by Judicial Arbitration and Mediation Services, Inc. ("***JAMS***") or its successor, under the then applicable JAMS rules; *provided however,* that this dispute resolution provision shall not apply to any separate agreements between the parties that do not themselves specify arbitration as an exclusive remedy. The location for the arbitration shall be Philadelphia, Pennsylvania. Any award made by such panel shall be final, binding and conclusive on the parties for all purposes, and judgment upon the award rendered by the arbitrators may be entered in any court having jurisdiction thereof. The arbitrators' fees and expenses and all administrative fees and expenses associated with the filing of the arbitration shall be borne by the Company; *provided however*, that at the Employee's option, Employee may voluntarily pay up to one-half the costs and fees, for which Employee shall be reimbursed by the Company. The parties acknowledge and agree that their obligations to arbitrate under this Section survive the termination of this Agreement and continue after the termination of the employment relationship between Employee and the Company. The parties each further agree that the arbitration provisions of this Agreement shall provide each party with its **exclusive remedy**, and each party expressly waives any right it might have to seek redress in any other forum, except as otherwise expressly provided in this Agreement. By election arbitration as the means for final settlement of all claims, **the parties hereby waive their respective rights to, and agree not to, sue each other in any action in a Federal, State or local court with respect to such claims, but may seek to enforce in court an arbitration award rendered pursuant to this Agreement. The parties specifically agree to waive their respective rights to a trial by jury, and further agree that no demand, request or motion will be made for trial by jury.**

IN WITNESS WHEREOF, the parties have executed this Employment Agreement on the day and year first written above.

COMPANY:

Verrica Pharmaceuticals Inc.

By: /s/ Ted White
Name: Ted White
Title: CEO

EMPLOYEE:

/s/ Joseph Bonaccorso
Joseph Bonaccorso

Exhibit A
Release Agreement

This Release Agreement ("***Release***" or "***Agreement***") is made by and between Joseph Bonaccorso ("you") and . (the "***Company***"). A copy of this Release is an attachment to the Employment Agreement between the Company and you dated , 2018 (the "***Employment Agreement***"). Capitalized terms not defined in this Agreement carry the definition found in the Employment Agreement.

1. Severance Payments; Other Payments.

a. In consideration for your execution, return and non-revocation of this Release on or after your Separation Date, the Company will provide you with the following severance benefits: [to include payment of specific severance payments and COBRA benefits to be paid].

b. In addition, regardless of whether you sign this Agreement, the Company affirms that it will pay the following on the next regularly scheduled date on which payroll is run, as required under Section 6 of the Employment Agreement,: [to include payment of all salary, business expense reimbursements and other amounts due to employee that are not part of the severance].

2. Compliance with Section 409A. The Severance Benefits offered to you by the Company are payable in reliance on Treasury Regulation Section 1.409A-1(b)(9) and the short term deferral exemption in Treasury Regulation Section 1.409A-1(b)(4). For purposes of Code Section 409A, your right to receive any installment payments (whether pay in lieu of notice, Severance Benefits, reimbursements or otherwise) shall be treated as a right to receive a series of separate payments and, accordingly, each installment payment shall at all times be considered a separate and distinct payment. All payments and benefits are subject to applicable withholdings and deductions.

3. Release. In exchange for the Severance Benefits and other consideration, to which you would not otherwise be entitled, and except as otherwise set forth in this Agreement, you, on behalf of yourself and, to the extent permitted by law, on behalf of your spouse, heirs, executors, administrators, assigns, insurers, attorneys and other persons or entities, acting or purporting to act on your behalf (collectively, the "***Employee Parties***"), hereby generally and completely release, acquit and forever discharge the Company, its parents and subsidiaries, and its and their officers, directors, managers, partners, agents, representatives, employees, attorneys, shareholders, predecessors, successors, assigns, insurers and affiliates (the "***Company Parties***") of and from any and all claims, liabilities, demands, contentions, actions, causes of action, suits, costs, expenses, attorneys' fees, damages, indemnities, debts, judgments, levies, executions and obligations of every kind and nature, in law, equity, or otherwise, both known and unknown, suspected and unsuspected, disclosed and undisclosed, arising out of or in any way related to my employment with the Company and separation therefrom, arising at any time prior to and including the execution date of this Agreement, including but not limited to: all such claims and demands directly or indirectly arising out of or in any way connected with your employment with the Company or the termination of that employment; claims or demands related to salary, bonuses, commissions, vacation pay, the right to receive additional grants of stock, stock options or other ownership interests in the Company, fringe benefits, expense reimbursements, severance pay, or any other form of compensation; claims pursuant to any federal, state or local law, statute, or cause of action; tort law; or contract law (individually a "***Claim***" and collectively "***Claims***"). The Claims you are releasing and waiving in this Agreement include, but are not limited to, any and all Claims that any of the Company Parties:

- has violated its personnel policies, handbooks, contracts of employment, or covenants of good faith and fair dealing;
- has discriminated against you on the basis of age, race, color, sex (including sexual harassment), national origin, ancestry, disability, religion, sexual orientation, marital status, parental status, source of income, entitlement to benefits, any union activities or other protected category in violation of any local, state or federal law, constitution, ordinance, or regulation, including but not limited to: the Age Discrimination in Employment Act, as amended ("***ADEA***"); Title VII of the

Civil Rights Act of 1964, as amended; the Civil Rights Act of 1991; 42 U.S.C. § 1981, as amended; the Equal Pay Act; the Americans With Disabilities Act; the Genetic Information Nondiscrimination Act; the Family and Medical Leave Act; the Employee Retirement Income Security Act; the Employee Polygraph Protection Act; the Worker Adjustment and Retraining Notification Act; the Older Workers Benefit Protection Act; the anti-retaliation provisions of the Sarbanes-Oxley Act, or any other federal or state law regarding whistleblower retaliation; the Lilly Ledbetter Fair Pay Act; the Uniformed Services Employment and Reemployment Rights Act; the Fair Credit Reporting Act; and the National Labor Relations Act; and

- has violated any statute, public policy or common law (including, but not limited to, Claims for retaliatory discharge; negligent hiring, retention or supervision; defamation; intentional or negligent infliction of emotional distress and/or mental anguish; intentional interference with contract; negligence; detrimental reliance; loss of consortium to you or any member of your family and/or promissory estoppel).

Notwithstanding the foregoing, other than events expressly contemplated by this Agreement you do not waive or release rights or Claims that may arise: (i) from events that occur after the date this Release is executed; (ii) that relate to a breach of this Agreement; (iii) that relate to any existing ownership interest in the Company as of the date this Release is executed; (iv) that relate to my existing rights under any Company benefit plan or any plan or agreement related to equity ownership in the Company that arise after this Release is executed; and (v) any Claims which cannot be waived by law, including, without limitation, any rights you may have under applicable workers' compensation laws. Nothing in this Agreement shall prevent you from filing, cooperating with, or participating in any proceeding or investigation before the Equal Employment Opportunity Commission, United States Department of Labor, the National Labor Relations Board, the Occupational Safety and Health Administration, the Securities and Exchange Commission or any other federal government agency, or similar state or local agency ("***Government Agencies***"), or exercising any rights pursuant to Section 7 of the National Labor Relations Act. You further understand this Agreement does not limit your ability to voluntarily communicate with any Government Agencies or otherwise participate in any investigation or proceeding that may be conducted by any Government Agency, including providing documents or other information, without notice to the Company. While this Agreement does not limit your right to receive an award for information provided to the Securities and Exchange Commission, you understand and agree that, you are otherwise waiving, to the fullest extent permitted by law, any and all rights you may have to individual relief based on any Claims that you have released and any rights you have waived by signing this Agreement. If any Claim is not subject to release, to the extent permitted by law, you waive any right or ability to be a class or collective action representative or to otherwise participate in any putative or certified class, collective or multi-party action or proceeding based on such a Claim in which any of the Company Parties is a party.

4. Your Acknowledgments and Affirmations. You also acknowledge and agree that (i) the consideration given to you in exchange for the waiver and release in this Agreement is in addition to anything of value to which you were already entitled, and (ii) that you have been paid for all time worked, have received all the leave, leaves of absence and leave benefits and protections for which you are eligible, and have not suffered any on-the-job injury for which you have not already filed a Claim. You affirm that all of the decisions of the Company Parties regarding your pay and benefits through the date of your execution of this Agreement were not discriminatory based on age, disability, race, color, sex, religion, national origin or any other classification protected by law. You affirm that you have not filed or caused to be filed, and are not presently a party to, a Claim against any of the Company Parties. You further affirm that you have no known workplace injuries or occupational diseases. You acknowledge and affirm that you have not been retaliated against for reporting any allegation of corporate fraud or other wrongdoing by any of the Company Parties, or for exercising any rights protected by law, including any rights protected by the Fair Labor Standards Act, the Family Medical Leave Act or any related statute or local leave or disability accommodation laws, or any applicable state workers' compensation law. In addition, you acknowledge that you are knowingly and voluntarily waiving and releasing any rights you may have under the ADEA ("**ADEA Waiver**"). You also acknowledge that the consideration given for the ADEA Waiver is in addition to anything of value to which you were already entitled. You further acknowledge that you have been advised by this writing, as required by the ADEA, that: (a) your release and waiver herein does not apply to any rights or claims that arise after the date you sign this Agreement; (b) you should consult with an attorney prior to signing this Agreement; (c) you have twenty-one (21) days to consider this Agreement (although you may choose to voluntarily sign it sooner); (d) you have seven (7) days following the date you sign this Agreement to revoke it (by sending written revocation directly to [ ]; and (e) the Agreement will not be effective until the date upon which the revocation period has expired unexercised, which will be the eighth (8th) day after you sign this Agreement.

5. Return of Company Property. By the Separation Date, you agree to return to the Company all Company documents (and all copies thereof) and other Company property that you have had in your possession at any time, including, but not limited to, Company files, notes, drawings, records, business plans and forecasts, financial information, specifications, computer-recorded information, tangible property (including, but not limited to, computers), credit cards, entry cards, identification badges and keys; and, any materials of any kind that contain or embody any proprietary or confidential information of the Company (and all reproductions thereof). Please coordinate return of Company property with [ ]. **Receipt of the Severance Benefits described in Section 1 of this Agreement is expressly conditioned upon return of all Company property.**

6. Confidential Information, Non-Competition and Non-Solicitation Obligations. Both during and after your employment you acknowledge your continuing obligations under your Proprietary Information, Inventions, Non-competition and Non-Solicitation Agreement not to use or disclose any confidential or proprietary information of the Company and comply with your post-employment non-competition and non-solicitation restrictions. The Company acknowledges that you will not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that: (A) is made (i) in confidence to a federal, state, or local government official, either directly or indirectly, or to an attorney and (ii) solely for the purpose of reporting or investigating a suspected violation of law; or (B) is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal. In addition, in the event that you file a lawsuit for retaliation by the Company for reporting a suspected violation of law, you may disclose the trade secret to your attorney and use the trade secret information in the court proceeding, if you: (A) file any document containing the trade secret under seal; and (B) do not disclose the trade secret, except pursuant to court order.

7. Confidentiality. The provisions of this Agreement will be held in strictest confidence by you and will not be publicized or disclosed in any manner whatsoever; *provided, however*, that: (a) you may disclose this Agreement to your immediate family; (b) you may disclose this Agreement in confidence to your attorney, accountant, auditor, tax preparer, and financial advisor; and (c) you may disclose this Agreement insofar as such disclosure may be required by law. Notwithstanding the foregoing, nothing in this Agreement shall limit your right to discuss your employment with the Equal Employment Opportunity Commission, United States Department of Labor, the National Labor Relations Board, other federal government agency or similar state or local agency or to discuss the terms and conditions of your employment with others to the extent expressly permitted by Section 7 of the National Labor Relations Act.

8. Non-Disparagement. You and the Company agree not to disparage each other, and the other's attorneys, directors, managers, partners, employees, agents and affiliates, in any manner likely to be harmful to them or their business, business reputation or personal reputation; provided that you and the Company will respond accurately and fully to any question, inquiry or request for information when required by legal process. For purposes of this Section 8, the obligations of the Company shall apply only to the senior management team and the members of the Board of Directors. Notwithstanding the foregoing, nothing in this Agreement shall limit your right to voluntarily communicate with the Equal Employment Opportunity Commission, United States Department of Labor, the National Labor Relations Board, other federal government agency or similar state or local agency or to discuss the terms and conditions of your employment with others to the extent expressly permitted by Section 7 of the National Labor Relations Act.

9. No Admission. This Agreement does not constitute an admission by you or by the Company of any wrongful action or violation of any federal, state, or local statute, or common law rights, including those relating to the provisions of any law or statute concerning employment actions, or of any other possible or claimed violation of law or rights.

10. Breach. You agree that upon any material breach of this Agreement you will forfeit all amounts paid or owing to you under this Agreement. Further, you acknowledge that it may be impossible to assess the damages caused by your violation of the terms of Sections 5, 6, 7 and 8 of this Agreement and further agree that any threatened or actual violation or breach of those Sections of this Agreement will constitute immediate and irreparable injury to the Company. You therefore agree that, in addition to any and all other damages and remedies available to the Company upon your breach of this Agreement, the Company shall be entitled to an injunction to prevent you from violating or breaching this Agreement.

11. Miscellaneous. This Agreement is entered into without reliance on any promise or representation, written or oral, other than those expressly contained herein, and it supersedes any other such promises, warranties or representations. This Agreement may not be modified or amended except in a writing signed by both you and a duly authorized officer of the Company. This Agreement will bind the heirs, personal representatives, successors and assigns of both you and the Company, and inure to the benefit of both you and the Company, their heirs, successors and assigns. If any provision of this Agreement is determined to be invalid or unenforceable, in whole or in part, this determination will not affect any other provision of this Agreement and the provision in question will be modified by the court so as to be rendered enforceable. This Agreement will be deemed to have been entered into and will be construed and enforced in accordance with the laws of the Commonwealth of Pennsylvania as applied to contracts made and to be performed entirely within the Commonwealth of Pennsylvania.

VERRICA PHARMACEUTICALS INC.

By: _____
Name:
Title:

_____
Joseph Bonaccorso

AMENDMENT TO EMPLOYMENT AGREEMENT

This Amendment to Employment Agreement (this "***Amendment***"), dated as of January 29, 2018, is made by and between Verrica Pharmaceuticals Inc., a Delaware corporation (the "***Company***"), and Joseph Bonaccorso ("***Employee***").

BACKGROUND

A. The Company and Employee entered into an Employment Agreement, effective as of January 6, 2018 (the "***Agreement***").

B. The Company and Consultant desire to amend the Agreement, as set forth herein.

AGREEMENT

NOW, THEREFORE, in consideration of the mutual covenants and agreements contained in this Amendment and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned agree as follows:

1. Employee Start Date. The Company and Employee agree that the Employee's employment start date shall be February 7, 2018.

2. Amendment. The Company and Employee agree that Section 6.1(f) of the Agreement is hereby deleted in its entirety and replaced with the following:

(f) For purposes of this Agreement, "***Severance Period***" shall mean (i) zero (0) months in the event a termination under this Section 6.1 or under Section 6.3 (an "***Involuntary Termination***") occurs on or before February 7, 2019, (ii) six (6) months in the event an Involuntary Termination occurs after February 7, 2019 and on or before February 7, 2020, and (iii) twelve (12) months in the event an Involuntary Termination occurs after February 7, 2020.

3. Effect of Amendment. Except as otherwise provided herein, all of the provisions of the Agreement are hereby ratified and confirmed and all the terms, conditions and provisions thereof remain in full force and effect.

[Signature Page to Follow]

IN WITNESS WHEREOF, the undersigned have executed this Amendment to Employment Agreement as of the date first set forth above.

COMPANY:

VERRICA PHARMACEUTICALS INC.

By: /s/ Ted White
Name: Ted White
Title: CEO

EMPLOYEE:

/s/ Joseph Bonaccorso
Name: Joseph Bonaccorso

VERRICA PHARMACEUTICALS INC.

EMPLOYMENT AGREEMENT

This Employment Agreement (the "Agreement") is made and entered into by and between Matthew Davidson, Ph.D. ("Executive"), and Verrica Pharmaceuticals Inc. (the "Company") (together referred to herein as the "Parties"), effective as of December 1, 2015 (the "Effective Date").

R E C I T A L S

A. The Company desires to assure itself of the services of Executive by engaging Executive to perform services under the terms hereof.

B. Executive desires to provide services to the Company on the terms herein provided.

C. Certain capitalized terms used in this Agreement are defined in Section 12 below.

In consideration of the foregoing, and for other good and valuable consideration, including the respective covenants and agreements set forth below, the receipt and sufficiency of which are hereby acknowledged, the Parties hereto agree as follows:

1. Employment.

(a) General. The Company shall employ Executive as a full-time employee of the Company effective as of the Effective Date in the position set forth in this Section 1, and upon the other terms and conditions herein provided.

(b) Position and Duties. Executive shall have the title of Chief Executive Officer of the Company, and shall report to the Board of Directors of the Company. Executive shall also serve in such other capacity or capacities as the Company may from time to time prescribe. As a Company employee, Executive will be expected to comply with Company policies.

(c) Location. Executive shall perform services for the Company at the Company's offices in San Carlos, California; *provided*, *however*, that the Company may from time to time require Executive to travel temporarily to other locations in connection with the Company's business.

(d) Exclusivity. During the term of this Agreement, Executive shall devote Executive's entire working time, attention and energies to the business of the Company.

2. Compensation and Related Matters.

(a) Base Salary. Executive's annual base salary ("Base Salary") as of December 1, 2015 shall be $180,000 per year, less payroll deductions and all required withholdings, payable in accordance with the Company's normal payroll practices. In addition, on the first payroll date following the Effective Date, the Company shall pay to Executive in a single cash lump sum, less payroll deductions and all required withholdings, the amount of $100,000. Executive's Base Salary shall be increased to $200,000 per year beginning January 1, 2016. In addition, the Board or a committee of the Board shall review Executive's Base Salary periodically and may increase Executive's Base Salary in connection with such reviews.

(b) Bonus. Beginning in 2016, Executive shall also be eligible for an annual bonus (the "Annual Bonus") based upon the Board's or a committee of the Board's evaluation of the achievement of specific individual and/or Company-wide performance goals determined in consultation with Executive at the beginning of each year. Executive's Annual Bonus will be targeted at 35% of Base Salary as of the Effective Date. The Annual Bonus, if any, shall be payable, less authorized deductions and required withholdings, no later than March 15th following the end of the applicable calendar year.

(c) Vacation; Benefits. Executive shall be entitled to paid time-off and such other benefits in accordance with Company policy for similarly situated senior management of the Company.

(d) Business Expenses. The Company shall reimburse Executive for all reasonable business expenses incurred in the conduct of Executive's duties hereunder in accordance with the Company's expense reimbursement policies.

3. Termination.

(a) At-Will Employment. The Company and Executive acknowledge that Executive's employment is and shall continue to be "at-will," as defined under applicable law. This means that it is not for any specified period of time and can be terminated by Executive or by the Company at any time, with or without advance notice, and for any or no particular reason or cause. It also means that Executive's job duties, title and responsibility and reporting level, work schedule, compensation and benefits, as well as the Company's personnel policies and procedures, may be changed with prospective effect, with or without notice, at any time in the sole discretion of the Company. This "at-will" nature of Executive's employment shall remain unchanged during Executive's tenure as an employee and may not be changed, except in an express writing signed by Executive and a duly authorized member of the Board. If Executive's employment terminates for any reason, Executive shall not be entitled to any payments, benefits, damages, awards or compensation other than as provided by this Agreement.

(b) Deemed Resignation. Upon termination of Executive's employment for any reason, Executive shall be deemed to have resigned from all offices and directorships, if any, then held with the Company or any of its affiliates, and, at the Company's request, Executive shall execute such documents as are necessary or desirable to effectuate such resignations.

4. Obligations upon Termination of Employment.

(a) Executive's Obligations.

(i) Confidentiality. Without limiting the At-Will Employment, Confidential Information, Invention Assignment, And Arbitration Agreement executed by Executive as of August 9, 2013 (the "Confidential Information Agreement"), except (A) as Executive reasonably and in good faith determines to be required in the faithful performance of Executive's duties hereunder, (B) as required by applicable law or (C) in accordance with Section 4(a)(iii) below, while Executive is employed by the Company, and thereafter, Executive shall not directly or indirectly disclose or make available to any person, firm, corporation, association or other entity for any reason or purpose whatsoever, any Confidential Information (as defined below). Upon termination of Executive's employment with the Company, all Confidential Information in Executive's possession that is in written or other tangible form (together with all copies or duplicates thereof, including computer files) shall be returned to the Company and shall not be retained by Executive or furnished to any third party, in any form except as provided herein; *provided, however*, that Executive shall not be obligated to treat as confidential, or return to the Company copies of any Confidential Information that (i) was publicly known at the time of disclosure to Executive, (ii) becomes publicly known or available thereafter other than by any means in violation of this Agreement or any other duty owed to the Company by any person or entity, or (iii) is lawfully disclosed to Executive by a third party other than in Executive's capacity as an employee of the Company. For purposes of this Agreement, the term "Confidential Information" shall mean information disclosed to Executive or known by Executive as a consequence of or through his or her relationship with the Company, about the customers, employees, business methods, public relations methods, organization, procedures or finances, including, without limitation, information of or relating to customer lists, of the Company and its affiliates. In addition, Executive shall continue to be subject to the Confidential Information Agreement.

(ii) Non-Solicitation. In addition to Executive's obligations under the Confidential Information Agreement, Executive shall not during the Executive's employment with the Company or for a period of one (1) year following Executive's termination of employment for any reason, either on Executive's own account or jointly with or as a manager, agent, officer, employee, consultant, partner, joint venturer, owner or stockholder or otherwise on behalf of any other person, firm or corporation, directly or indirectly solicit or attempt to solicit away from the Company any of its officers or employees or offer employment to any person who is an officer or employee of the Company; *provided, however*, that a general advertisement to which an employee of the Company responds shall in no event be deemed to result in a breach of this Section 4(a). Executive also agrees not to harass or disparage the Company or its employees, clients, directors or agents or divert or attempt to divert any actual or potential business of the Company.

(iii) Response to Legal Process. Executive may respond to a lawful and valid subpoena or other legal process but shall give the Company the earliest possible notice thereof, and shall, as much in advance of the return date as possible, make available to the Company and its counsel the documents and other information sought, and shall assist such counsel in resisting or otherwise responding to such process. Company shall reimburse Executive costs of complying with these activities.

(iv) Survival of Provisions. The provisions of this Section 4(a) shall survive the termination or expiration of the Executive's employment with the Company and shall be fully enforceable thereafter. If it is determined by a court of competent jurisdiction in any state that any restriction in this Section 4(a) is excessive in duration or scope or is unreasonable or unenforceable under the laws of that state, it is the intention of the parties that such restriction may be modified or amended by the court to render it enforceable to the maximum extent permitted by the law of that state.

(b) Payments of Accrued Obligations upon Termination of Employment. Upon a termination of Executive's employment for any reason, Executive (or Executive's estate or legal representative, as applicable) shall be entitled to receive, within ten (10) days after the date Executive terminates employment with the Company (or such earlier date as may be required by applicable law): (i) any portion of Executive's Base Salary earned through Executive's termination date not theretofore paid, (ii) any expenses owed to Executive under Section 2(d) above, (iii) any accrued but unused vacation pay owed to Executive under the Company's then-current vacation policy pursuant to Section 2(c) above, and (iv) any amount arising from Executive's participation in, or benefits under, any employee benefit plans, programs or arrangements under Section 2(c) above, which amounts shall be payable in accordance with the terms and conditions of such employee benefit plans, programs or arrangements.

(c) Severance Payments upon a Covered Termination. If Executive experiences a Covered Termination, and if Executive delivers to the Company a general release of all claims against the Company and its affiliates in a form acceptable to the Company (a "Release of Claims") that becomes effective and irrevocable within sixty (60) days, or such shorter period of time specified by the Company, following such Covered Termination, then in addition to any accrued obligations payable under Section 4(b) above, the Company shall provide Executive with the following:

(i) Severance.

(A) Executive shall be entitled to receive continued payment of his then-existing base salary, less applicable withholdings, for the Severance Period (as defined below) in accordance with the Company's normal payroll procedures; provided, however, that the first such payment shall be on the first regularly scheduled payroll date occurring on or after the sixtieth (60th) day following the date of the Covered Termination (such payroll date, the "First Payroll Date"), and any amounts otherwise payable prior to the First Payroll Date shall be paid on the First Payroll Date without interest thereon. For the purposes hereof, "Severance Period" shall mean the period commencing on Executive's Covered Termination and ending on the first anniversary of the Covered Termination or, in the case of a Covered Termination occurring on or after a Change in Control, the first anniversary of the Covered Termination.

(ii) Continued Healthcare. The Company shall notify Executive of any right to continue group health plan coverage sponsored by the Company or an affiliate of the Company immediately prior to Executive's date of termination pursuant to the provisions of the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended ("COBRA"). If Executive elects to receive such continued healthcare coverage, the Company shall directly pay, or reimburse Executive for, the premium for Executive and Executive's covered dependents, less the amount of Executive's monthly premium contributions for such coverage prior to termination, until the earlier of (i) the end of the month during which the Severance Period ends and (ii) the date Executive and Executive's covered dependents, if any, become eligible for healthcare coverage under another employer's plan(s) (of which eligibility Executive agrees to give prompt notice to the Company) (in any case, the "COBRA Period"). Notwithstanding the foregoing, (i) if any plan pursuant to which such benefits are provided is not, or ceases prior to the expiration of the period of continuation coverage to be, exempt from the application of Section 409A of the Code under Treasury Regulation Section 1.409A-1(a)(5), or (ii) the Company is otherwise unable to continue to cover Executive under its group health plans without penalty under applicable law (including without limitation, Section 2716 of the Public Health Service Act), then, in either case, an amount equal to each remaining Company subsidy shall thereafter be paid to Executive in substantially equal monthly installments over the COBRA Period (or the remaining portion thereof). After the Company ceases to pay premiums pursuant to this Section 4(c)(ii), Executive may, if eligible, elect to continue healthcare coverage at Executive's expense in accordance the provisions of COBRA.

(iii) Equity Awards. Executive's then outstanding restricted stock or other equity awards covering shares of the Company's common stock shall accelerate in full, provided that vesting (or lapsing of repurchase rights) with respect to shares of stock purchased by Executive pursuant to that certain Restricted Stock Purchase Agreement between Executive and the Company dated as of August 8, 2013, as amended from time to time (the "Restricted Stock Purchase Agreement"), shall be determined in accordance with the Restricted Stock Purchase Agreement.

(d) No Other Severance. The provisions of this Section 4 shall supersede in their entirety any severance program or other arrangement provided by the Company.

(e) No Requirement to Mitigate; Survival. Executive shall not be required to mitigate the amount of any payment provided for under this Agreement by seeking other employment or in any other manner. Notwithstanding anything to the contrary in this Agreement, the termination of Executive's employment shall not impair the rights or obligations of any party.

(f) Certain Reductions. The Company shall reduce Executive's severance benefits under this Agreement, in whole or in part, by any other severance benefits, pay in lieu of notice, or other similar benefits payable to Executive by the Company in connection with Executive's termination, including but not limited to payments or benefits pursuant to (i) any applicable legal requirement, including, without limitation, the Worker Adjustment and Retraining Notification Act, or (ii) any Company policy or practice providing for Executive to remain on the payroll without being in active service for a limited period of time after being given notice of the termination of Executive's employment. The benefits provided under this Agreement are intended to satisfy, to the greatest extent possible, any and all statutory obligations that may arise out of Executive's termination of employment. Such reductions shall be applied on a retroactive basis, with severance benefits previously paid being recharacterized as payments pursuant to the Company's statutory obligation.

5. Acceleration Upon a Change in Control. Notwithstanding anything herein to the contrary, in the event of a Change in Control of the Company, Executive's then outstanding restricted stock or other equity awards covering shares of the Company's common stock shall accelerate in full immediately prior to such Change in Control.

6. Limitation on Payments.

(a) Notwithstanding anything in this Agreement to the contrary, if any payment or distribution Executive would receive pursuant to this Agreement or otherwise ("Payment") would (a) constitute a "parachute payment" within the meaning of Section 280G of the Internal Revenue Code of 1986, as amended (the "Code"), and (b) but for this sentence, be subject to the excise tax imposed by Section 4999 of the Code (the "Excise Tax"), then the Company shall cause to be determined, before any amounts of the Payment are paid to Executive, which of the following alternative forms of payment would maximize Executive's after-tax proceeds: (i) payment in full of the entire amount of the Payment (a "Full Payment"), or (ii) payment of only a part of the Payment so that Executive receives that largest Payment possible without being subject to the Excise Tax (a "Reduced Payment"), whichever of the foregoing amounts, taking into account the applicable federal, state and local income taxes and the Excise Tax (all computed at the highest marginal rate, net of the maximum reduction in federal income taxes which could be obtained from a deduction of such state and local taxes), results in Executive's receipt, on an after-tax basis, of the greater amount of the Payment, notwithstanding that all or some portion the Payment may be subject to the Excise Tax.

(b) If a Reduced Payment is made pursuant to this Section 6, (i) the Payment shall be paid only to the extent permitted under the Reduced Payment alternative, and Executive shall have no rights to any additional payments and/or benefits constituting the Payment, and (ii) reduction in payments and/or benefits will occur in the following order: (1) reduction of cash payments; (2) cancellation of accelerated vesting of equity awards other than stock options; (3) cancellation of accelerated vesting of stock options; and (4) reduction of other benefits payable to Executive. In the event that acceleration of compensation from Executive's equity awards is to be reduced, such acceleration of vesting shall be canceled in the reverse order of the date of grant.

(c) The independent registered public accounting firm engaged by the Company for general audit purposes as of the day prior to the effective date of the Change in Control of the Company shall make all determinations required to be made under this Section 6. If the independent registered public accounting firm so engaged by the Company is serving as accountant or auditor for the individual, group or entity effecting the Change in Control, the Company shall appoint a nationally recognized independent registered public accounting firm to make the determinations required hereunder. The Company shall bear all expenses with respect to the determinations by such independent registered public accounting firm required to be made hereunder.

(d) The independent registered public accounting firm engaged to make the determinations hereunder shall provide its calculations, together with detailed supporting documentation, to the Company and Executive within 15 calendar days after the date on which Executive's right to a Payment is triggered (if requested at that time by the Company or Executive) or such other time as requested by the Company or Executive. If the independent registered public accounting firm determines that no Excise Tax is payable with respect to a Payment, either before or after the application of the Reduced Amount, it shall furnish the Company and Executive with an opinion reasonably acceptable to Executive that no Excise Tax will be imposed with respect to such Payment. Any good faith determinations of the accounting firm made hereunder shall be final, binding and conclusive upon the Company and Executive.

7. Successors.

(a) Company's Successors. Any successor to the Company (whether direct or indirect and whether by purchase, merger, consolidation, liquidation or otherwise) to all or substantially all of the Company's business and/or assets shall assume the obligations under this Agreement and agree expressly to perform the obligations under this Agreement in the same manner and to the same extent as the Company would be required to perform such obligations in the absence of a succession. For all purposes under this Agreement, the term "Company" shall include any successor to the Company's business and/or assets which executes and delivers the assumption agreement described in this Section 7(a) or which becomes bound by the terms of this Agreement by operation of law.

(b) Executive's Successors. The terms of this Agreement and all rights of Executive hereunder shall inure to the benefit of, and be enforceable by, Executive's personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees and legatees.

8. Notices. Notices and all other communications contemplated by this Agreement shall be in writing and shall be deemed to have been duly given when personally delivered or one day following mailing via Federal Express or similar overnight courier service. In the case of Executive, mailed notices shall be addressed to Executive at Executive's home address that the Company has on file for Executive. In the case of the Company, mailed notices shall be addressed to its corporate headquarters, and all notices shall be directed to the attention of the Board of Directors of the Company.

9. Dispute Resolution. To ensure the timely and economical resolution of disputes that arise in connection with this Agreement, Executive and the Company agree that any and all disputes, claims, or causes of action arising from or relating to the enforcement, breach, performance or interpretation of this Agreement, Executive's employment, or the termination of Executive's employment, shall be resolved to the fullest extent permitted by law by final, binding and confidential arbitration, by a single arbitrator, in San Mateo County, California, conducted by Judicial Arbitration and Mediation Services, Inc. ("JAMS") under the applicable JAMS employment rules. **By agreeing to this arbitration procedure, both Executive and the Company waive the right to resolve any such dispute through a trial by jury or judge or administrative proceeding**. The arbitrator shall: (i) have the authority to compel adequate discovery for the resolution of the dispute and to award such relief as would otherwise be permitted by law; and (ii) issue a written arbitration decision, to include the arbitrator's essential findings and conclusions and a statement of the award. The arbitrator shall be authorized to award any or all remedies that Executive or the Company would be entitled to seek in a court of law. The Company shall pay all JAMS' arbitration fees in excess of the amount of court fees that would be required if the dispute were decided in a court of law. Nothing in this Agreement is intended to prevent either Executive or the Company from obtaining injunctive relief in court to prevent irreparable harm pending the conclusion of any such arbitration. Notwithstanding the foregoing, Executive and the Company each have the right to resolve any issue or dispute over intellectual property rights by Court action instead of arbitration.

10. Miscellaneous Provisions.

(a) Withholdings and Offsets. The Company shall be entitled to withhold from any amounts payable under this Agreement any federal, state, local or foreign withholding or other taxes or charges which the Company is required to withhold. The Company shall be entitled to rely on an opinion of counsel if any questions as to the amount or requirement of withholding shall arise. If Executive is indebted to the Company at his or her termination date, the Company reserves the right to offset any severance payments under this Agreement by the amount of such indebtedness.

(b) Waiver. No provision of this Agreement shall be modified, waived or discharged unless the modification, waiver or discharge is agreed to in writing and signed by Executive and by an authorized officer of the Company (other than Executive). No waiver by either party of any breach of, or of compliance with, any condition or provision of this Agreement by the other party shall be considered a waiver of any other condition or provision or of the same condition or provision at another time.

(c) Whole Agreement. This Agreement and the Confidential Information Agreement represent the entire understanding of the parties hereto with respect to the subject matter hereof and supersede all prior arrangements and understandings regarding same, including, without limitation, any vesting provisions of Executive's equity award agreements.

(d) Amendment. This Agreement cannot be amended or modified except by a written agreement signed by Executive and a duly authorized officer of the Company.

(e) Choice of Law. The validity, interpretation, construction and performance of this Agreement shall be governed by the laws of the State of California.

(f) Severability. The finding by a court of competent jurisdiction of the unenforceability, invalidity or illegality of any provision of this Agreement shall not render any other provision of this Agreement unenforceable, invalid or illegal. Such court shall have the authority to modify or replace the invalid or unenforceable term or provision with a valid and enforceable term or provision which most accurately represents the intention of the parties hereto with respect to the invalid or unenforceable term or provision.

(g) Interpretation; Construction. The headings set forth in this Agreement are for convenience of reference only and shall not be used in interpreting this Agreement. This Agreement has been drafted by legal counsel representing the Company, but Executive has been encouraged to consult with, and has consulted with, Executive's own independent counsel and tax advisors with respect to the terms of this Agreement. The parties hereto acknowledge that each party hereto and its counsel has reviewed and revised, or had an opportunity to review and revise, this Agreement, and any rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of this Agreement.

(h) Representations; Warranties. Executive represents and warrants that Executive is not restricted or prohibited, contractually or otherwise, from entering into and performing each of the terms and covenants contained in this Agreement, and that Executive's execution and performance of this Agreement will not violate or breach any other agreements between Executive and any other person or entity and that Executive has not engaged in any act or omission that could be reasonably expected to result in or lead to an event constituting "Cause" for purposes of this Agreement.

(i) Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together will constitute one and the same instrument.

11. Section 409A. The intent of the parties is that the payments and benefits under this Agreement comply with or be exempt from Section 409A of the Code and the Department of Treasury regulations and other interpretive guidance issued thereunder, including without limitation any such regulations or other guidance that may be issued after the Effective Date, ("Section 409A") and, accordingly, to the maximum extent permitted, this Agreement shall be interpreted to be in compliance therewith. If the Company determines that any provision of this Agreement would cause Executive to incur any additional tax or interest under Section 409A (with specificity as to the reason therefor), the Company and Executive shall take commercially reasonable efforts to reform such provision to try to comply with or be exempt from Section 409A through good faith modifications to the minimum extent reasonably appropriate to

conform with Section 409A, *provided* that any such modifications shall not increase the cost or liability to the Company. To the extent that any provision hereof is modified in order to comply with or be exempt from Section 409A, such modification shall be made in good faith and shall, to the maximum extent reasonably possible, maintain the original intent and economic benefit to Executive and the Company of the applicable provision without violating the provisions of Section 409A.

(a) Separation from Service. Notwithstanding any provision to the contrary in this Agreement, no amount deemed deferred compensation subject to Section 409A of the Code shall be payable pursuant to Section 4 unless Executive's termination of employment constitutes a "separation from service" with the Company within the meaning of Section 409A ("Separation from Service") and, except as provided under Section 11(b) of this Agreement, any such amount shall not be paid, or in the case of installments, commence payment, until the sixtieth (60th) day following Executive's Separation from Service. Any installment payments that would have been made to Executive during the sixty (60) day period immediately following Executive's Separation from Service but for the preceding sentence shall be paid to Executive on the sixtieth (60th) day following Executive's Separation from Service and the remaining payments shall be made as provided in this Agreement.

(b) Specified Employee. Notwithstanding any provision to the contrary in this Agreement, if Executive is deemed at the time of his or her separation from service to be a "specified employee" for purposes of Section 409A(a)(2)(B)(i) of the Code, to the extent delayed commencement of any portion of the benefits to which Executive is entitled under this Agreement is required in order to avoid a prohibited distribution under Section 409A(a)(2)(B)(i) of the Code, such portion of Executive's benefits shall not be provided to Executive prior to the earlier of (i) the expiration of the six (6)-month period measured from the date of Executive's Separation from Service or (ii) the date of Executive's death. Upon the first day of the seventh month following the date of the Executive's separation from service, all payments deferred pursuant to this Section 11(b) shall be paid in a lump sum to Executive, and any remaining payments due under this Agreement shall be paid as otherwise provided herein.

(c) Expense Reimbursements. To the extent that any reimbursements payable pursuant to this Agreement are subject to the provisions of Section 409A, any such reimbursements payable to Executive pursuant to this Agreement shall be paid to Executive no later than December 31 of the year following the year in which the expense was incurred, the amount of expenses reimbursed in one year shall not affect the amount eligible for reimbursement in any subsequent year, and Executive's right to reimbursement under this Agreement will not be subject to liquidation or exchange for another benefit.

(d) Installments. For purposes of Section 409A (including, without limitation, for purposes of Treasury Regulation Section 1.409A-2(b)(2)(iii)), Executive's right to receive any installment payments under this Agreement shall be treated as a right to receive a series of separate payments and, accordingly, each such installment payment shall at all times be considered a separate and distinct payment.

12. Definition of Terms. The following terms referred to in this Agreement shall have the following meanings:

(a) Cause. "Cause" means the occurrence of any of the following events, as determined by the Board or a committee designated by the Board, in its sole discretion: (i) Executive's commission of any felony or any crime involving fraud, dishonesty, or moral turpitude under the laws of the United States or any state thereof; (ii) Executive's attempted commission of, or participation in, a fraud or act of material dishonesty against the Company; (iii) Executive's intentional, material violation of any contract or agreement between Executive and the Company or of any statutory duty owed to the Company; (iv) Executive's unauthorized use or disclosure of the Company's confidential information or trade secrets; or (v) Executive's gross misconduct.

(b) Change in Control. "Change in Control" means (i) a sale, lease, exchange or other transfer in one transaction or a series of related transactions of all or substantially all of the Company's assets, or (ii) a merger or consolidation of the Company with or into any other corporation or other entity or person or any other transaction or a series of related transactions, including the sale by the Company of new shares of its capital stock or a transfer of existing shares of capital stock of the Company, the result of which is that a third party that is not an affiliate of the Company or its stockholders (or a group of third parties not affiliated with the Company or its stockholders) immediately prior to such transaction acquires or holds capital stock of the Company representing a majority of the Company's outstanding voting power immediately following such transaction; provided that the following events shall not constitute a "Change in Control": (A) a transaction (other than a sale of all or substantially all of the Company's assets) in which the holders of the voting securities of the Company immediately prior to the merger, consolidation or other transaction hold, directly or indirectly, at least a majority of the voting securities in the successor corporation or its parent immediately after the merger, consolidation or other transaction; (B) a sale, lease, exchange or other transaction in one transaction or a series of related transactions of all or substantially all of the Company's assets to an affiliate of the Company; (C) an initial public offering of any of the Company's securities; (D) a reincorporation of the Company solely to change its jurisdiction; (E) a transaction undertaken for the primary purpose of creating a holding company that will be owned in substantially the same proportion by the persons who held the Company's securities immediately before such transaction; or (F) any transaction or series of transactions principally for bona fide equity financing purposes in which cash is received by the Company or any successor or indebtedness of the Company is cancelled or converted or a combination thereof. Notwithstanding the foregoing, if a Change in Control would give rise to a payment or settlement event with respect to any amount that constitutes "nonqualified deferred compensation," the transaction or event constituting the Change in Control must also constitute a "change in control event" (as defined in Treasury Regulation §1.409A-3(i)(5)) in order to give rise to the payment or settlement event for such amount, to the extent required by Section 409A of the Code.

(c) Covered Termination. "Covered Termination" means the termination of Executive's employment by the Company other than for Cause or by Executive for Good Reason.

(d) Good Reason. "Good Reason" means Executive's resignation from all positions he or she then holds with the Company if (i) (A) there is a material diminution in Executive's duties or responsibilities with the Company; *provided*, *however*, that a change in title will not constitute Good Reason; (B) there is a material reduction of Executive's base salary; or (C) Executive is required to relocate Executive's primary work location to a facility or location that would increase Executive's one-way commute distance and is more than twenty-five (25) miles from Executive's primary work location as of immediately prior to such change, (ii) Executive provides written notice outlining such conditions, acts or omissions to the Company within thirty (30) days immediately following such material change or reduction, (iii) such material change or reduction is not remedied by the Company within thirty (30) days following the Company's receipt of such written notice and (iv) Executive's resignation is effective not later than thirty (30) days after the expiration of such thirty (30) day cure period.

(Signature page follows)

IN WITNESS WHEREOF, each of the parties has executed this Agreement, in the case of the Company by its duly authorized officer, as of the day and year set forth below.

VERRICA PHARMACEUTICALS INC.

By: /s/ Matthew Davidson
Name: Matthew Davidson, Ph.D.
Title: CEO

Date: December 2, 2015

EXECUTIVE

/s/ Matthew Davidson
Name: Matthew Davidson, Ph.D.

Date: December 2, 2015

EXHIBIT 10.12

SERVICES AGREEMENT

THIS SERVICES AGREEMENT (this "Agreement") is entered into as of the 1st day of December, 2015, by and between PBM Capital Group, LLC, a Delaware limited liability company ("PBM"), and Verrica Pharmaceuticals Inc., a Delaware corporation (the "Company").

R E C I T A L S

A. The Company is engaged in the business of developing, manufacturing, marketing and selling topical therapies for the treatment of lesional skin diseases such as Verruca vulgaris (common warts and plantar warts) and Molluscum contagiosum (collectively, the "Business").

B. PBM has expertise in providing accounting and other administrative and management services related to businesses that are similar to the Business.

C. The Company has retained PBM to provide certain accounting and other services for the Company under the terms and conditions stated herein; provided, however, that the Company will control and be fully responsible for its business and facilities.

D. The Company and PBM desire to set forth the terms and conditions on which such services will be provided in the future.

NOW, THEREFORE, on the basis of the facts set forth above, and in consideration of the covenants, mutual promises and conditions set forth below, the parties agree as follows:

A G R E E M E N T

1. Retention of PBM. The Company hereby engages PBM to provide certain accounting and back office support services to the Company on the terms and conditions set forth herein, and PBM hereby accepts such engagement.

2. Duties and Responsibilities of PBM. During the Term (as defined below), PBM, through its duly appointed representative or representatives, shall provide the Company with certain strategy and business development, operations management, technical support, contract support, accounting and other services, as determined by mutual agreement of PBM and the Company from time to time, which services shall include, without limitation, the performance of the following functions (collectively, the "Services"):

(a) strategy and business development, including supporting the Company on pursuing partnering, financing, and regulatory planning;

(b) operations management, including assisting in the operational execution of the Company's strategic plan as approved by the Board of Directors;

(c) technical support, including review of key technical documents and regulatory filings and planning/executing of key development studies;

(d) contract negotiation and review and other corporate support;

(e) processing purchase orders issued by the Company;

(f) administer the payment of approved and budgeted bills and expenses by the Company;

(g) administer the payroll of the Company, including payment of wages, salaries or commissions to all full or part-time on-site employees employed by the Company, and all amounts due for workmen's compensation insurance, social security taxes or levies now in force or hereafter imposed with respect to any such employees or personnel;

(h) maintain financial books and records for the Company;

(i) obtain professional services on behalf of Company with respect to audit and outside accounting services and oversee the performance of such services;

(j) oversee the preparation of financial statements state, local and federal tax returns to be filed by the Company; and

(k) furnish such other services as are incidental to the foregoing or usually or customarily furnished by a financial manager.

PBM agrees to use reasonable diligence in the exercise of the powers and duties conferred upon it in this Agreement, in the performance of the Services.

3. Duties and Responsibilities of the Company. During the Term, the Company shall cooperate with PBM and shall provide timely responses to PBM's reasonable requests to enable PBM to perform the Services. All officers and directors of the Company shall reasonably cooperate with PBM in the fulfillment of its duties hereunder, including, without limitation, attending (or sending representatives to attend) meetings, providing input to PBM and being available for consultation and signing documents, at PBM's reasonable request.

4. Management Fee. The Company shall pay a fee to PBM for the Services rendered in an amount of $5,000 per month, which fee shall be paid on or before the last day of each calendar month in arrears. After a period of six (6) months and after every month thereafter, the Board of Directors may evaluate the Company's utilization of Services under this Agreement and adjust the fee, as appropriate, to reflect the utilization of Services.

5. Term and Termination.

(a) Term. This Agreement shall commence on the effective date hereof and shall continue for a period of twelve (12) months, unless terminated earlier in accordance with this Section 5 (such period, the "Initial Term"). Following the Initial Term, this Agreement shall automatically renew for successive monthly periods (each, a "Renewal Term") unless terminated by either Party upon notice to the other Party at least one month prior to the conclusion of the Initial Term or then-current Renewal Term. The Initial Term and any Renewal Term shall be, collectively, the "Term."

(b) This Agreement may be terminated by the either party with "Cause" (as defined below) by providing written notice to the other party. If this Agreement is terminated by the Company with Cause, PBM will be entitled to receive solely that portion of the management fee set forth in Section 4 above that is accrued as of the effective date of such termination. For purposes of this Agreement, "Cause" shall mean: (a) non-terminating party's material breach of this Agreement, if such material breach continues for thirty (30) days with failure to cure by non-terminating party following written notice specifying such breach by the terminating party; (b) the theft, fraud, or embezzlement by the non-terminating party of any part of the real or personal property, tangible or intangible, of the terminating party or any of its affiliates; (c) the commission of an act of fraud upon, or bad faith or willful misconduct toward, the terminating party or any of its affiliates by the non-terminating party; or (d) the conviction of, or the entering of a guilty plea or plea of no contest by, the non-terminating party with respect to a felony involving dishonesty, theft, or fraud.

(c) Rights Upon Termination. The termination of this Agreement shall not release or discharge either party from any obligation, debt or liability that shall have previously accrued and remain to be performed through the effective date of termination.

6. Force Majeure. Notwithstanding any other provision contained herein, neither PBM nor the Company shall be deemed to be in default under this Agreement for the failure to perform any of its obligations required pursuant to this Agreement if such failure is a result of governmental intervention, labor disputes, acts of God or any other event that is beyond the reasonable control of the defaulting party.

7. Banking. All income and other funds of the Company shall be collected by the Company and maintained in such bank account(s) as the Company shall determine from time to time in its sole discretion. All such funds shall be and shall remain the sole property of the Company. As determined by mutual agreement of PBM and the Company from time to time, PBM may administer and process all of the payments by the Company pursuant to Section 2. PBM shall not process payment for any liability or expense that is not set forth in a budget that was approved by the Company's Board of Directors (as such budgets may be amended from time to time by the Board of Directors).

8. Indemnification. The Company shall indemnify and hold PBM harmless from and against all claims, demands, costs, expenses, liabilities and losses (including reasonable attorneys' and paralegals' fees) that may result against PBM as a consequence of PBM's performance of services under this Agreement, except to the extent caused by PBM's breach of this Agreement, gross negligence, violation of law or intentional misconduct. PBM shall indemnify and hold the Company harmless from and against all claims, demands, costs, expenses, liabilities and losses (including reasonable attorneys' and paralegals' fees) that may result against the Company as a consequence of PBM's breach of this Agreement, gross negligence, violation of law or intentional misconduct.

9. Limitation of Liability. IN NO EVENT SHALL EITHER PARTY BE LIABLE TO THE OTHER PARTY, OR TO ANY OTHER PERSON OR ENTITY, FOR ANY LOST PROFITS, LOST SAVINGS, LOST DATA OR OTHER SPECIAL, INCIDENTAL, INDIRECT CONSEQUENTIAL, OR PUNITIVE DAMAGES OF ANY KIND ARISING OUT OF, OR IN

CONNECTION WITH, THIS AGREEMENT OR ANY SERVICES, WORK PRODUCT OR DELIVERABLES PROVIDED OR DELIVERED PURSUANT TO THIS AGREEMENT EVEN IF IT HAS BEEN INFORMED IN ADVANCE OF THE POSSIBILITY OF SUCH DAMAGES. EACH PARTY'S TOTAL LIABILITY TO THE OTHER PARTY FOR ALL CLAIMS ARISING OUT OF, OR RELATING TO, THIS AGREEMENT, REGARDLESS OF THE FORM OF ACTION, SHALL BE LIMITED TO THE TOTAL PAYMENTS RECEIVED BY PBM UNDER THIS AGREEMENT.

10. Notices. Any and all notices, designation, consents, offers, acceptances or any other communication provided herein, shall be in writing and deemed given three (3) days after deposited in the U.S. Mail, registered or certified mail, return receipt requested, addressed, (i) in the case of PBM, to 200 Garrett Street, Suite S, Charlottesville, Virginia 22902, Attn: Corporate Counsel, and (ii) in the case of the Company, to XXX, Attn: XXX, or in each case to such other address or addresses as may be specified in a notice given in a manner described in this section.

11. Governing Law. This Agreement and all questions relating to its validity, interpretation, performance and enforcement shall be governed by and construed in accordance with the laws of the State of Delaware notwithstanding any conflict or choice of laws provisions to the contrary.

12. Binding Effect. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective legal representatives, successors and assigns, except that neither party shall have the right to assign this Agreement, or its rights or obligations hereunder, without the written consent of the other party hereto (which consent shall not be unreasonably withheld, conditioned or delayed).

13. Miscellaneous Provisions.

(a) Integration. This Agreement constitutes the entire Agreement between the parties and contains all of the agreements between the parties with respect to the subject matter hereof. This Agreement supersedes any and all other agreements, either oral or in writing, between the parties hereto with respect to the subject matter of this Agreement.

(b) Modification. No change or modification of this Agreement shall be valid unless the same is in writing and signed by the parties hereto. No waiver of any provision of this Agreement shall be valid unless in writing and signed by the person or party to be charged.

14. Waivers. Neither the failure nor any delay on the part of any party to exercise any right, remedy, power or privilege ("Right") under this Agreement shall operate as a waiver thereof, nor shall any single or partial exercise of any Right preclude any other or further exercise of the same or of any other Right, nor shall any waiver of any Right with respect to any occurrence be construed as a waiver of such Right with respect to any such occurrence. No waiver shall be effective unless it is in writing and is signed by the party asserted to have granted such waiver.

15. Counterparts. This Agreement may be executed by facsimile signature and in any number of counterparts, all of which, when taken together, shall constitute one and the same Agreement.

16. Headings. The headings in this Agreement are inserted for convenience only and are not to be considered in the construction of the provisions hereof.

17. Status of Parties. In the performance of the work, duties and obligations under this Agreement, it is mutually understood and agreed that each party is at all times acting and performing as an independent contractor with respect to the other party and that no relationship of partnership, joint venture or employment is created by this Agreement.

18. No Rights or Liabilities in Third Parties. This Agreement is not intended to, nor shall it be construed to, create any rights or liabilities in any third parties.

19. Severability. Whenever possible, each provision of this Agreement shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement is held to be prohibited by or invalid under applicable law, such provision shall be ineffective only to the extent of such prohibition or invalidity, without invalidating the remainder of this Agreement.

[Signatures appear on following page(s).]

IN WITNESS WHEREOF, the parties hereto have caused this Services Agreement to be effective as of the date first above written.

PBM:

PBM CAPITAL GROUP, LLC

By: /s/ Paul Manning
Name: Paul Manning
Title: CEO

COMPANY:

VERRICA PHARMACEUTICALS, INC.

By: /s/ Matthew Davidson
Name: Matthew Davidson
Title: President and Chief Executive Officer

[Signature Page to PBM Services Agreement]

AMENDMENT TO SERVICES AGREEMENT

This Amendment to Services Agreement (this "***Amendment***"), dated as of March 29, 2018, is made by and between Verrica Pharmaceuticals Inc., a Delaware corporation (the "***Company***"), and PBM Capital Group, LLC, a Delaware limited liability company ("***PBM***"). Capitalized terms used but not otherwise defined herein shall have the meanings given thereto in the Agreement (defined below).

BACKGROUND

A. The Company and PBM entered into a Services Agreement dated as of December 2, 2015 (the "***Agreement***"); and

B. The parties desire to adjust the fee set forth in the Agreement to reflect the Company's current utilization of Services thereunder as contemplated by Section 4 of the Agreement, and to further amend the termination section of the Agreement to allow for partial termination of Services, all as more particularly set forth below.

AGREEMENT

NOW, THEREFORE, in consideration of the mutual covenants and agreements contained in this Amendment and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned agree as follows:

1. Effective Date. The Company and PBM agree that the changes agreed upon in this Amendment shall be effective in all respects as of April 1, 2018 (the "***Effective Date***").

2. Amendment of Fee. The Company and PBM agree that, effective as of the Effective Date, Section 4 of the Agreement shall be amended (i) to remove "$2,500 per month" in such Section and replace it with "$50,000 per month (the "***Fee***")" and (ii) to replace the lowercase term "fee" in two places in such Section following the new defined term with the capitalized term "Fee."

3. Amendment to Term. The Company and PBM agree that, effective as of the Effective Date, Section 5(a) of the Agreement shall be deleted in its entirety and replaced with the following:

"(a) Term. The current renewal term of this Agreement shall commence as of the Effective Date and shall continue for a period of twelve (12) months, unless terminated earlier in accordance with this Section 5 (such period, the "2018 Renewal Term"). Following the 2018 Renewal Term, this Agreement shall automatically renew for successive monthly periods (each a "Subsequent Renewal Term") unless terminated by either Party upon notice to the other Party at least one month prior to the conclusion of the 2018 Renewal Term or any given Subsequent Renewal Term. The period from December 2, 2015 to the Effective Date, together with the 2018 Renewal Term and any and all Subsequent Renewal Terms shall be, collectively, the "Term.""

4. Amendment of Termination Provisions. The Company and PBM agree that, effective as of the Effective Date, Section 5(c) of the Agreement shall be moved to Section 5(d) of the Agreement and a new Section 5(c) shall be added as follows:

"(c) In lieu of termination of the entire Agreement as provided elsewhere in this Section 5, the Company and PBM agree that, at any time during the Term of this Agreement, the Company may elect to terminate (by delivery of written notice to that effect to PBM at least thirty (30) days prior to the effectiveness of any such termination), or the Parties may mutually agree to terminate, the Company's utilization of Services in any of the individual functional areas described below (each a "***Functional Area***" and any such partial termination, an "***Individual Service Termination***"), and in the event of any such Individual Service Termination, the Fee for any period on and after the effectiveness of such Individual Service Termination shall be reduced by the Fee Adjustment amount set forth opposite such Functional Area in the table below:

Functional Area	**Fee Adjustment**
Manufacturing/CMC	$ 5,395.83
Accounting Management	$ 8,833.34
Accounting Staff	$ 4,833.33
Human Resources	$ 1,041.67
Contract Administration and Legal Support	$ 11,500.00
Business Development / Strategic Planning	$ 18,395.83

In the event of any Individual Service Termination, the Company and PBM agree to (i) select an effective date for such Individual Service Termination that allows for an orderly wind down of Services in the specified Functional Area, and (ii) cooperate in all efforts to fully transition all matters relating to the terminated Functional Area from PBM to the Company or its agent on or before the date identified as the effective date of such Individual Service Termination."

5. Amendment to Notice Address. The address for the Company set forth in Section 10 of the Agreement is hereby deleted in its entirety and replaced with the following: "10 North High Street, West Chester, PA 19380, Attn: Ted White."

6. Effect of Amendment. Except as otherwise provided herein, all of the provisions of the Agreement are hereby ratified and confirmed and all the terms, conditions and provisions thereof remain in full force and effect.

[Signature Page to Follow]

IN WITNESS WHEREOF, the undersigned have executed this Amendment to Services Agreement as of the date first set forth above.

COMPANY: VERRICA PHARMACEUTICALS INC.

By: /s/ Ted White
Name: Ted White
Title: CEO

PBM: PBM CAPITAL GROUP, LLC

By: /s/ Chris Reebals
Name: Chris Reebals
Title: CFO

VERRICA PHARMACEUTICALS INC.

ADVISOR AGREEMENT

This Advisor Agreement ("**Agreement**") is made and entered into as of August 7th 2014 (the "**Effective Date**"), by and between Verrica Pharmaceuticals Inc., a Delaware corporation (the "**Company**"), and Glenn Oclassen ("**Advisor**"). The Company desires to retain Advisor as an independent contractor to perform certain advisory services for the Company, and Advisor is willing to perform such services, on terms set forth more fully below. In consideration of the mutual promises contained herein, and other good and valuable consideration, the parties agree as follows:

1. **SERVICES AND COMPENSATION**

(a) Services. Advisor agrees to (i) advise the Company on general strategic business and technical matters in line with the responsibilities set forth in Appendix A, (ii) use his/her best efforts to meet with the Company's Board of Directors and/or management in person once ever calendar quarter, and (iii) collaborate and provide advice and assistance to the Company as is mutually agreed by the parties (collectively, the "**Services**").

(b) Compensation. Subject to the approval of the Company's Board of Directors, Advisor will be granted a nonstatutory stock option under the Company's 2014 Equity Incentive Plan to purchase up to 142,132 shares of the Company's Common Stock. 1/24th of the aggregate number of shares subject to such option shall vest on the corresponding day of each month after July 30th 2014 subject to Advisor continuing to be a service provider to the Company through each such date. The option will be evidenced by and subject to all of the terms of the Company's form of stock option agreement.

2. **CONFIDENTIALITY**

(a) Definition. "Confidential Information" means any Company proprietary information, technical data, trade secrets or know-how, including, but not limited to, research, product plans, products, services, customers, customer lists, databases, markets, software, developments, inventions, processes, formulas, technology, designs, drawings, engineering, hardware configuration information, marketing, finances or other business information disclosed by the Company either directly or indirectly in writing, orally or by drawings or inspection of equipment.

(b) Non-Use and Non-Disclosure. Advisor will not, during or subsequent to the term of this Agreement, use the Company's Confidential Information for any purpose whatsoever other than the performance of the Services on behalf of the Company or disclose the Company's Confidential Information to any third party. It is understood that said Confidential Information shall remain the sole property of the Company. Advisor further agrees to take all reasonable precautions to prevent any unauthorized disclosure of such Confidential Information including, but not limited to, having each employee of Advisor, if any, with access to any Confidential Information, execute a nondisclosure agreement containing provisions in the Company's favor identical to Sections 2, 3 and 4 of this Agreement. Confidential Information does not include information which (i) is known to Advisor at the time of disclosure to Advisor by the Company as evidenced by written records of Advisor, (ii) has become publicly known and made generally available through no wrongful act of Advisor, or (iii) has been rightfully received by Advisor from a third party who is authorized to make such disclosure.

(c) Other Employer's Confidential Information. Advisor agrees that Advisor will not, during the term of this Agreement, improperly use or disclose any proprietary information or trade secrets of any former or current employer or other person or entity with which Advisor has an agreement or duty to keep in confidence information acquired by Advisor, if any, and that Advisor will not bring onto the premises of the Company any unpublished document or proprietary information belonging to such employer, person or entity unless consented to in writing by such employer, person or entity. Advisor will indemnify the Company and hold it harmless from and against all claims, liabilities, damages and expenses, including reasonable attorneys fees and costs of suit, arising out of or in connection with any violation or claimed violation of a third party's rights resulting in whole or in part from the Company's use of the work product of Advisor under this Agreement.

(d) Third Party Confidential Information. Advisor recognizes that the Company has received and in the future will receive from third parties their confidential or proprietary information subject to a duty on the Company's part to maintain the confidentiality of such information and to use it only for certain limited purposes. Advisor agrees that Advisor owes the Company and such third parties, during the term of this Agreement and thereafter, a duty to hold all such confidential or proprietary information in the strictest confidence and not to disclose it to any person, firm or corporation or to use it except as necessary in carrying out the Services for the Company consistent with the Company's agreement with such third party.

(e) Return of Materials. Upon the termination of this Agreement, or upon Company's earlier request, Advisor will deliver to the Company all of the Company's property or Confidential Information that Advisor may have in Advisor's possession or control.

3. **OWNERSHIP**

(a) Assignment. Advisor agrees that all copyrightable material, notes, records, drawings, designs, inventions, improvements, developments, discoveries and trade secrets (collectively, "**Inventions**") conceived, made or discovered by Advisor, solely or in collaboration with others, during the period of this Agreement which relate in any manner to the business of the Company that Advisor may be directed to undertake, investigate or experiment with, or which Advisor may become associated with in work, investigation or experimentation in the line of business of Company in performing the Services hereunder, are the sole property of the Company. Advisor further agrees to assign (or cause to be assigned) and does hereby assign fully to the Company all Inventions and any copyrights, patents, mask work rights or other intellectual property rights relating thereto.

(b) Further Assurances. Advisor agrees to assist Company, or its designee, at the Company's expense, in every proper way to secure the Company's rights in the Inventions and any copyrights, patents, mask work rights or other intellectual property rights relating thereto in any and all countries, including the disclosure to the Company of all pertinent information and data with respect thereto, the execution of all applications, specifications, oaths, assignments and all other instruments which the Company shall deem necessary in order to apply for and obtain such rights and in order to assign and convey to the Company, its successors, assigns and nominees the sole and exclusive right, title and interest in and to such Inventions, and any copyrights, patents, mask work rights or other intellectual property rights relating thereto. Advisor further agrees that Advisor's obligation to execute or cause to be executed, when it is in Advisor's power to do so, any such instrument or papers shall continue after the termination of this Agreement.

(c) Pre-Existing Materials. Advisor agrees that if in the course of performing the Services, Advisor incorporates into any Invention developed hereunder any invention, improvement, development, concept, discovery or other proprietary information owned by Advisor or in which Advisor has an interest, (i) Advisor shall inform Company in writing before incorporating such invention, improvement, development, concept, discovery or other proprietary information into any Invention; and (ii) the Company is hereby granted and shall have a nonexclusive, royalty-free, perpetual, irrevocable, worldwide license to make, have made, modify, use and sell such item as part of or in connection with such Invention. Advisor shall not incorporate any invention, improvement, development, concept, discovery or other proprietary information owned by any third party into any Invention without Company's prior written permission.

(d) Attorney in Fact. Advisor agrees that if the Company is unable because of Advisor's unavailability, dissolution, mental or physical incapacity, or for any other reason, to secure Advisor's signature to apply for or to pursue any application for any United States or foreign patents or mask work or copyright registrations covering the Inventions assigned to the Company above, then Advisor hereby irrevocably designates and appoints the Company and its duly authorized officers and agents as Advisor's agent and attorney in fact, to act for and in Advisor's behalf and stead to execute and file any such applications and to do all other lawfully permitted acts to further the prosecution and issuance of patents, copyright and mask work registrations thereon with the same legal force and effect as if executed by Advisor.

4. **CONFLICTING OBLIGATIONS**

Advisor certifies that Advisor has no outstanding agreement or obligation that is in conflict with any of the provisions of this Agreement, or that would preclude Advisor from complying with the provisions hereof, and further certifies that Advisor will not enter into any such conflicting agreement during the term of this Agreement.

5. **TERM AND TERMINATION**

(a) Term. This Agreement will commence on the date first written above and will continue until the earlier of (i) final completion of the Services or (ii) termination as provided below.

(b) Termination. Advisor and the Company may terminate this Agreement at will. Any such notice of termination by a party shall be addressed to the other party at the address for such other party shown below or such other address as such other party may notify the terminating party of from time to time in writing and shall be deemed given upon delivery if personally delivered, or forty-eight (48) hours after deposited in the United States mail, postage prepaid, registered or certified mail, return receipt requested.

(c) Survival. Upon such termination all rights and duties of the parties toward each other shall cease except Section(s) 2 (Confidentiality), 3 (Ownership) and 7 (Independent Contractor) shall survive termination of this Agreement.

6. **ASSIGNMENT**

Neither this Agreement nor any right hereunder or interest herein may be assigned or transferred by Advisor without the express written consent of the Company.

7. **INDEPENDENT CONTRACTOR**

It is the express intention of the parties that Advisor is an independent contractor. Nothing in this Agreement shall in any way be construed to constitute Advisor as an agent, employee or representative of the Company, but Advisor shall perform the Services hereunder as an independent contractor. Advisor agrees to furnish (or reimburse the Company for) all tools and materials necessary to accomplish this contract, and shall incur all expenses associated with performance, except as expressly agreed upon by the Company. Advisor acknowledges and agrees that Advisor is obligated to report as income all compensation received by Advisor pursuant to this Agreement, and Advisor agrees to and acknowledges the obligation to pay all self-employment and other taxes thereon. Advisor further agrees to indemnify and hold harmless the Company and its directors, officers, and employees from and against all taxes, losses, damages, liabilities, costs arid expenses, including attorney's fees and other legal expenses, arising directly or indirectly from (i) any negligent, reckless or intentionally wrongful act of Advisor or Advisor's assistants, employees or agents, including, but not limited to, any damage to or disclosure of any Company Confidential Information (ii) a determination by a court or agency that the Advisor is not an independent contractor, or (iii) any breach by the Advisor or Advisor's assistants, employees or agents of any of the covenants contained in this Agreement.

8. **ARBITRATION AND EQUITABLE RELIEF**

(a) Disputes. Except as provided in Section 8(d) below, the Company and Advisor agree that any dispute or controversy arising out of, relating to or in connection with the interpretation, validity, construction, performance, breach or termination of this Agreement shall be settled by binding arbitration to be held in Santa Clara County, California, in accordance with the Commercial Arbitration Rules, supplemented by the Supplemental Procedures for Large Complex Disputes, of the American Arbitration Association as then in effect (the "**Rules**"). The arbitrator may grant injunctions or other relief in such dispute or controversy. The decision of the arbitrator shall be final, conclusive and binding on the parties to the arbitration. Judgment may be entered on the arbitrator's decision in any court of competent jurisdiction.

(b) Consent to Personal Jurisdiction. The arbitrator(s) shall apply California law to the merits of any dispute or claim, without reference to conflicts of law rules. Advisor hereby consents to the personal jurisdiction of the state and federal courts located in California for any action or proceeding arising from or relating to this Agreement or relating to any arbitration in which the parties are participants.

(c) Costs. The Company and Advisor shall each pay one-half of the costs and expenses of such arbitration, and each shall separately pay its counsel fees and expenses unless otherwise required by law.

(d) Equitable Relief. The parties may apply to any court of competent jurisdiction for a temporary restraining order, preliminary injunction, or other interim or conservatory relief, as necessary, without breach of this arbitration agreement and without abridgment of the powers of the arbitrator.

(e) Acknowledgment. ADVISOR HAS READ AND UNDERSTANDS SECTION 8, WHICH DISCUSSES ARBITRATION. ADVISOR UNDERSTANDS THAT BY SIGNING THIS AGREEMENT, ADVISOR AGREES TO SUBMIT ANY CLAIMS ARISING OUT OF, RELATING TO, OR IN CONNECTION WITH THIS AGREEMENT, OR THE INTERPRETATION, VALIDITY, CONSTRUCTION, PERFORMANCE, BREACH OR TERMINATION THEREOF, TO BINDING ARBITRATION, EXCEPT AS PROVIDED IN SECTION 8(d), AND THAT THIS ARBITRATION CLAUSE CONSTITUTES A WAIVER OF ADVISOR'S RIGHT TO A JURY TRIAL AND RELATES TO THE RESOLUTION OF ALL DISPUTES RELATING TO ALL ASPECTS OF THE RELATIONSHIP BETWEEN THE PARTIES.

9. **GOVERNING LAW**

This Agreement shall be governed by the internal substantive laws, but not the choice of law rules, of the State of California.

10. **ENTIRE AGREEMENT**

This Agreement constitutes the entire agreement of the parties and supersedes any prior agreements between them, whether written or oral, with respect to the subject matter hereof. No waiver, alteration, or modification of any of the provisions of this Agreement shall be binding unless in writing and signed by duly authorized representatives of the parties hereto.

11. **ATTORNEY'S FEES**

In any court action at law or equity which is brought by one of the parties to enforce or interpret the provisions of this Agreement, the prevailing party will be entitled to reasonable attorney's fees, in addition to any other relief to which that party may be entitled.

12. **SEVERABILITY**

The invalidity or unenforceability of any provision of this Agreement, or any terms thereof, shall not affect the validity of this Agreement as a whole, which shall at all times remain in full force and effect.

(*Signature page follows*)

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.

ADVISOR

/s/ Glenn Oclassen

Address:

VERRICA PHARMACEUTICALS INC.

By: /s/ Matthew Davidson
Name: Matthew Davidson
Title: Chief Executive Officer

Address:
XXX
XXX

APPENDIX A

Glenn Oclassen

Upon expansion of the Board of Directors, and at the request of the current board, Glenn Oclassen will serve as a board member for Verrica Pharmaceuticals Inc. At such time a separate agreement will be drafted defining the responsibilities of this position. The compensation herein is inclusive of the current role as an advisor and the future role as a board member.

Advisor Responsibilities

- Helping to evaluate business opportunities
- Helping to make strategic decisions
- Networking – Making introductions and phone calls
- Reviewing contracts and agreements
- Participating in phone calls and meetings with key opinion leaders and regulatory authorities
- Providing general insight and strategy regarding drug development

VERRICA PHARMACEUTICALS INC.

AMENDED AND RESTATED RESTRICTED STOCK PURCHASE AGREEMENT

This Amended and Restated Restricted Stock Purchase Agreement (the "***Agreement***") is made as of December 1, 2015 by and between Verrica Pharmaceuticals Inc., a Delaware corporation (the "***Company***"), and Matthew Davidson (the "***Purchaser***").

WHEREAS, the Purchaser previously purchased from the Company and the Company previously issued and sold to the Purchaser an aggregate of 6,000,000 shares (the "***Shares***") of the Company's common stock, par value $0.0001 per share ("***Common Stock***"), pursuant to that certain Restricted Stock Purchase Agreement, dated as of August 8, 2013, by and between the Company and the Purchaser (the "***Prior Agreement***").

WHEREAS, the Company and certain investors (the "***Investors***") are parties to that certain Series A Preferred Stock Purchase Agreement, pursuant to which such Investors are purchasing shares of the Company's Series A Preferred Stock.

WHEREAS, the Company and the Purchaser desire to induce such Investors to purchase shares of Series A Preferred Stock pursuant to the Series A Preferred Stock Purchase Agreement by entering into this Agreement, which shall amend and restate the Prior Agreement in its entirety, on the terms and conditions as set forth herein.

NOW, THEREFORE, IT IS AGREED, In consideration of the mutual covenants and representations set forth below, and for good and valuable consideration, the receipt, adequacy and legal sufficiency of which are hereby acknowledged, the Company and the Purchaser agree as follows:

1. **Purchase and Sale of the Shares**.

A. Subject to the terms and conditions of this Agreement, the Company sold to the Purchaser and the Purchaser purchased from the Company at the Closing (as defined below) the Shares, at a price of $0.0001 per share (the "***Purchase Price***"), for an aggregate purchase price of $600.00. As additional consideration for the Company's agreement to sell the Shares, the Purchaser transferred and assigned to the Company (i) the business plan of the Company (the "***Business Plan***") and (ii) any and all right, title and interest the Purchaser had in the Company's business and any Intellectual Property (as defined below) related to the Company's business, as then conducted and as then contemplated to be conducted pursuant to the Business Plan or otherwise. For purposes hereof, "***Intellectual Property***" means: (i) United States and foreign patents, trademarks, copyrights and mask works, registrations and applications therefor, and rights granted upon any reissue, division, continuation or continuation-in-part thereof, (ii) trade secret rights arising out of the laws of any and all jurisdictions, (iii) ideas, inventions, concepts, technology, software, methods, processes, drawings, illustrations, writings know-how, show-how, trade names, domain names, web addresses and web sites, and all rights therein and thereto, (iv) any other intellectual property rights, whether or not registrable, and (v) licenses in or to any of the foregoing. Further, the Purchaser agrees to take all actions reasonably requested by the Company to assist the Company in effecting the foregoing transfer and in establishing, perfecting, defending, enforcing and protecting the Company's rights in any of the above transferred items, including without limitation assisting in the prosecution of any patent applications included in or based upon the Intellectual Property.

B. To facilitate the investments by the Investors, the Purchaser agrees to allow the Company to repurchase from the Purchaser 180,217 of the total number of Shares (the "***Repurchased Shares***") effective on the date hereof at the Purchase Price for an aggregate purchase price of $18.03 at the Repurchase Closing (as defined below).

2. **Closings**.

A. The purchase and sale of the Shares occurred at a closing (the "***Closing***") held on August 8, 2013. The Closing took place at the principal office of the Company. At the Closing, the Purchaser delivered the aggregate Purchase Price set forth above to the Company by wire transfer, check or any other method of payment permissible under applicable law and approved by the Company's board of directors (or any combination of such methods of payment).

B. The purchase and sale of the Repurchased Shares shall occur at a closing (the "***Repurchase Closing***") to be held on the date first set forth above. The Closing will take place at the principal office of the Company or at such other place as shall be designated by the Company. At the Closing, the Company shall deliver the aggregate Purchase Price set forth above to the Purchaser by wire transfer, check or any other method of payment permissible under applicable law and approved by the Company's board of directors (or any combination of such methods of payment), and the Purchaser agrees to deliver to the Company and/or the Escrow Agent (as defined below) a stock power and assignment separate from certificate to give effect to the Company's repurchase of the Repurchase Shares at the Repurchase Closing.

3. **Repurchase Option**.

A. ***Option***. In the event the Purchaser ceases to be an employee, consultant, advisor, officer or director of the Company (a "***Service Provider***") for any or no reason, including, without limitation, by reason of the Purchaser's death or disability (as defined in Section 22(e)(3) of the Internal Revenue Code of 1986, as amended (the "***Code***"), "***Disability***"), resignation or involuntary termination, the Company shall, from such time (as determined by the Company in its discretion), have an irrevocable, exclusive option to repurchase (the "***Repurchase Option***") any Shares which have not yet been released from the Repurchase Option (the "***Unreleased Shares***"), at a price per share equal to the lesser of (x) the fair market value of the shares at the time the Repurchase Option is exercised, as determined by the Company's board of directors and (y) the Purchase Price (the "***Repurchase Price***"). The Company may exercise its Repurchase Option as to any or all of the Unreleased Shares at any time after the Purchaser ceases to be a Service Provider; provided, however, that without requirement of further action on the part of either party hereto, the Repurchase Option shall be deemed to have been automatically exercised as to all Unreleased Shares at 5:00 p.m. (Pacific Time) as of the date that is 60 days following the date the Purchaser ceases to be a Service Provider, unless the Company declines in writing to exercise its Repurchase Option prior to such time.

B. ***Exercise***. If the Company decides not to exercise its Repurchase Option, it shall notify the Purchaser in writing within 60 days of the date the Purchaser ceases to be a Service Provider. If the Repurchase Option is exercised or deemed exercised, within 90 days of the date the Purchaser ceases to be a Service Provider, the Company shall deliver payment to the Purchaser, with a copy to the Escrow Agent (as defined in **Section 8** hereof), by any of the following methods, in the Company's sole discretion: (i) delivering to the Purchaser or the Purchaser's executor a check in the amount of the aggregate Repurchase Price, (ii) canceling an amount of the Purchaser's indebtedness to the Company equal to the aggregate Repurchase Price, or (in) any combination of (i) and (ii) such that the combined payment and cancellation of indebtedness equals the aggregate Repurchase Price.

C. ***Rights upon Exercise***. In the event that the Repurchase Option is exercised or deemed exercised, the sole right and remedy of the Purchaser thereafter shall be to receive the Repurchase Price, and in no case shall the Purchaser have any claim of ownership as to any of the Unreleased Shares.

D. ***Assignability***. The Company in its sole discretion may assign all or part of the Repurchase Option to one or more employees, officers, directors or stockholders of the Company or other persons or organizations.

4. **Release of Shares from Repurchase Option; Vesting**.

A. ***Vesting***. As of the date hereof, the Purchase and the Company agree that 4,364,837 of the total number of Shares are released from the Repurchase Option. So long as the Purchaser's continuous status as a Service Provider has not yet terminated in each such instance, 1,454,946 of the remaining Shares (subject to appropriate adjustment in the event of a stock split, stock dividend, combination, reclassification, or similar event affecting the Company's stock) shall be released from the Repurchase Option on the earliest to occur of (i) the Company's consummation of a Change of Control, (ii) the U.S. Food and Drug Administration's approval of the Company's new drug application for cantharidin or a cantharidin derivative, (iii) the Company's commencement of commercial sale of Products and (iv) a Covered Termination; provided, that, in the case of clause (iv) of this sentence, the Purchaser delivers to the Company a general release of all claims against the Company and its affiliates in a form acceptable to the Company that becomes effective and irrevocable within 60 days, or such shorter period of time specified by the Company, following such Covered Termination.

B. ***"Change of Control" Definition***. For purposes of this Agreement, a "***Change of Control***" means (i) a sale, lease, exchange or other transfer in one transaction or a series of related transactions of all or substantially all of the Company's assets, or (ii) a merger or consolidation of the Company with or into any other corporation or other entity or person or any other transaction or a series of related transactions, including the sale by the Company of new shares of its capital stock or a transfer of existing shares of capital stock of the Company, the result of which is that a third party that is not an affiliate of the Company or its stockholders (or a group of third parties not affiliated with the Company or its stockholders) immediately prior to such transaction acquires or holds capital stock of the Company representing a majority of the Company's outstanding voting power immediately following such transaction; provided, that the following events shall not constitute a "Change in Control": (A) a transaction (other than a sale of all or substantially all of the Company's assets) in which the holders of the voting securities of the Company immediately prior to the merger, consolidation or other transaction hold, directly or

indirectly, at least a majority of the voting securities in the successor corporation or its parent immediately after the merger, consolidation or other transaction; (B) a sale, lease, exchange or other transaction in one transaction or a series of related transactions of all or substantially all of the Company's assets to an affiliate of the Company; (C) an initial public offering of any of the Company's securities; (D) a reincorporation of the Company solely to change its jurisdiction; (E) a transaction undertaken for the primary purpose of creating a holding company that will be owned in substantially the same proportion by the persons who held the Company's securities immediately before such transaction; or (F) any transaction or series of transactions principally for bona fide equity financing purposes in which cash is received by the Company or any successor or indebtedness of the Company is cancelled or converted or a combination thereof.

C. ***"Cause" Definition***. For purposes of this Agreement, "***Cause***" shall mean: means the occurrence of any of the following events, as determined by the Board of Directors of the Company or a committee designated by the Board of Directors of the Company, in its sole discretion: (i) Purchaser's commission of any felony or any crime involving fraud, dishonesty, or moral turpitude under the laws of the United States or any state thereof; (ii) Purchaser's attempted commission of, or participation in, a fraud or act of material dishonesty against the Company; (iii) Purchaser's intentional, material violation of any contract or agreement between Purchaser and the Company or of any statutory duty owed to the Company; (iv) Purchaser's unauthorized use or disclosure of the Company's confidential information or trade secrets; or (v) Purchaser's gross misconduct.

D. ***"Good Reason" Definition***. For purposes of this Agreement, "***Good Reason***" shall mean Purchaser's resignation from all positions he then holds with the Company if (i) (A) there is a material diminution in Purchaser's duties or responsibilities with the Company; *provided*, *however*, that a change in title will not constitute Good Reason; (B) there is a material reduction of Purchaser's base salary; or (C) Purchaser is required to relocate Purchaser's primary work location to a facility or location that would increase Purchaser's one-way commute distance and is more than twenty-five (25) miles from Purchaser's primary work location as of immediately prior to such change, (ii) Purchaser provides written notice outlining such conditions, acts or omissions to the Company within thirty (30) days immediately following such material change or reduction, (iii) such material change or reduction is not remedied by the Company within thirty (30) days following the Company's receipt of such written notice and (iv) Purchaser's resignation is effective not later than thirty (30) days after the expiration of such thirty (30) day cure period.

E. ***Covered Termination***. For purposes of this Agreement, "***Covered Termination***" means the termination of Purchaser's employment by the Company other than for Cause or by Purchaser for Good Reason.

F. ***Product***. For purposes of this Agreement, "***Product***" means a product that has cantharidin or a cantharidin derivative as its active pharmaceutical ingredient and that is approved by the U.S. Food and Drug Administration.

G. ***Delivery of Released Shares***. Subject to the provisions of **Section 8**, the Shares that have been released from the Company's Repurchase Option shall be delivered to the Purchaser at the Purchaser's request.

5. **Limitation on Payments**.

A. ***Payments Limitation***. In the event that the severance and other benefits provided for in this Agreement or otherwise payable to the Purchaser (i) constitute "***parachute payments***" within the meaning of Section 280G of the Code, and (ii) would be subject to the excise tax imposed by Section 4999 of the Code (the "***Excise Tax***"), then the Purchaser's benefits under this Agreement shall be either:

(1) delivered in full, or

(2) delivered as to such lesser extent which would result in no portion of such benefits being subject to the Excise Tax,

whichever of the foregoing amounts, taking into account the applicable federal, state and local income taxes and the Excise Tax, results in the receipt by the Purchaser on an after-tax basis, of the greatest amount of benefits, notwithstanding that all or some portion of such benefits may be taxable under Section 4999 of the Code. Any reduction in payments and/or benefits required by this **Section 5** will occur in the following order: (1) reduction of cash payments; (2) reduction of vesting acceleration of equity awards; and (3) reduction of other benefits paid or provided to the Purchaser. In the event that acceleration of vesting of equity awards is to be reduced, such acceleration of vesting will be cancelled in the reverse order of the date of grant for the Purchaser's equity awards. If two or more equity awards are granted on the same date, each award will be reduced on a pro-rata basis. In no event will the Purchaser exercise any discretion with respect to the ordering of any reductions of payments or benefits under this **Section 5**.

B. ***Determination***. Unless the Company and the Purchaser otherwise agree in writing, any determination required under this **Section 5** shall be made in writing by the Company's independent public accountants (the "***Accountants***"), whose determination shall be conclusive and binding upon the Purchaser and the Company for all purposes. For purposes of making the calculations required by this **Section 5**, the Accountants may make reasonable assumptions and approximations concerning applicable taxes and may rely on reasonable, good faith interpretations concerning the application of Section 280G and 4999 of the Code. The Company and the Purchaser shall furnish to the Accountants such information and documents as the Accountants may reasonably request in order to make a determination under this **Section 5**. The Company shall bear all costs the Accountants may reasonably incur in connection with any calculations contemplated by this **Section 5**.

6. **Restrictions on Transfer**.

A. ***Investment Representations and Legend Requirements***. The Purchaser made the investment representations listed on Exhibit A to the Company as of the date of the Prior Agreement and as of the date of the Closing as of the date of this Agreement and as of the date of the Closing, and agrees that such representations are incorporated into this Agreement by this reference, such that the Company may rely on them in issuing the Shares. The Purchaser understands and agrees that the Company shall cause the legends set forth below, or substantially equivalent legends, to be placed upon any certificate(s) or book entry positions evidencing ownership of the Shares, together with any other legends that may be required by the Company or by applicable state or federal securities laws:

THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933 (THE "***ACT***") AND MAY NOT BE OFFERED, SOLD OR OTHERWISE TRANSFERRED, PLEDGED OR HYPOTHECATED UNLESS AND UNTIL REGISTERED UNDER THE ACT OR, IN THE OPINION OF COUNSEL SATISFACTORY TO THE ISSUER OF THESE SECURITIES, SUCH OFFER, SALE OR TRANSFER, PLEDGE OR HYPOTHECATION OTHERWISE COMPLIES WITH THE ACT.

THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO CERTAIN RESTRICTIONS ON TRANSFER, A RIGHT OF FIRST REFUSAL, A LOCK-UP PERIOD IN THE EVENT OF A PUBLIC OFFERING AND A REPURCHASE OPTION HELD BY THE ISSUER OR ITS ASSIGNEE(S) AS SET FORTH IN THE AMENDED AND RESTATED RESTRICTED STOCK PURCHASE AGREEMENT BETWEEN THE ISSUER AND THE ORIGINAL HOLDER OF THESE SHARES, A COPY OF WHICH MAY BE OBTAINED AT THE PRINCIPAL OFFICE OF THE ISSUER. SUCH TRANSFER RESTRICTIONS, RIGHT OF FIRST REFUSAL, LOCK-UP PERIOD AND REPURCHASE OPTION ARE BINDING ON TRANSFEREES OF THESE SHARES.

B. ***Stop-Transfer Notices***. The Purchaser agrees that to ensure compliance with the restrictions referred to herein, the Company may issue appropriate "stop transfer" instructions to its transfer agent, if any, and that, if the Company transfers its own securities, it may make appropriate notations to the same effect in its own records.

C. ***Refusal to Transfer***. The Company shall not be required (i) to transfer on its books any Shares that have been sold or otherwise transferred in violation of any of the provisions of this Agreement or (ii) to treat as owner of such Shares or to accord the right to vote or pay dividends to any purchaser or other transferee to whom such Shares shall have been so transferred.

D. ***Lock-Up Period***. The Purchaser hereby agrees that the Purchaser shall not sell, offer, pledge, contract to sell, grant any option or contract to purchase, purchase any option or contract to sell, grant any right or warrant to purchase, lend or otherwise transfer or encumber, directly or indirectly, any Shares or other securities of the Company, nor shall the Purchaser enter into any swap, hedging or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of any Shares or other securities of the Company, during the period from the filing of the first registration statement of the Company filed under the Securities Act of 1933, as amended (the "***Securities Act***"), that includes securities to be sold on behalf of the Company to the public in an underwritten public offering under the

Securities Act through the end of the 180-day period following the effective date of such registration statement (or such other period as may be requested by the Company or the underwriters to accommodate regulatory restrictions on (i) the publication or other distribution of research reports and (ii) analyst recommendations and opinions, including, but not limited to, the restrictions contained in NASD Rule 2711(f)(4) or NYSE Rule 472(f)(4), or any successor provisions or amendments thereto). The obligations described in this section shall not apply to a registration relating solely to employee benefit plans on Form S-l or Form S-8 or similar forms that may be promulgated in the future, or a registration relating solely to a transaction on Form S-4 or similar forms that may be promulgated in the future. The Purchaser further agrees, if so requested by the Company or any representative of its underwriters, to enter into such underwriter's standard form of "lockup" or "market standoff" agreement in a form satisfactory to the Company and such underwriter. The Company may impose stop-transfer instructions with respect to securities subject to the foregoing restrictions until the end of any such restriction period.

E. ***Unreleased Shares***. No Unreleased Shares subject to the Repurchase Option contained in **Section 3** of this Agreement, nor any beneficial interest in such Shares, shall be sold, gifted, transferred, encumbered or otherwise disposed of in any way (whether by operation of law or otherwise) by the Purchaser, other than as expressly permitted or required by **Section 3**.

F. ***Released Shares***. No Shares purchased pursuant to this Agreement, nor any beneficial interest in such Shares, shall be sold, transferred, encumbered or otherwise disposed of in any way (whether by operation of law or otherwise) by the Purchaser or any subsequent transferee, other than in compliance with the Company's right of first refusal provisions contained in **Section 7** of this Agreement.

7. **Company's Right of First Refusal**. Before any Shares acquired by the Purchaser pursuant to this Agreement (or any beneficial interest in such Shares) may be sold, transferred, encumbered or otherwise disposed of in any way (whether by operation of law or otherwise) by the Purchaser or any subsequent transferee (each a "***Holder***"), such Holder must first offer such Shares or beneficial interest to the Company and/or its assignee(s) as follows:

A. ***Notice of Proposed Transfer***. The Holder shall deliver to the Company a written notice stating: (i) the Holder's bona fide intention to sell or otherwise transfer the Shares; (ii) the name of each proposed transferee; (iii) the number of Shares to be transferred to each proposed transferee; (iv) the bona fide cash price or other consideration for which the Holder proposes to transfer the Shares; and (v) that by delivering the notice, the Holder offers all such Shares to the Company and/or its assignee(s) pursuant to this section and on the same terms described in the notice.

B. ***Exercise of Right of First Refusal***. At any time within 30 days after receipt of the Holder's notice, the Company and/or its assignee(s) may, by giving written notice to the Holder, elect to purchase all, but not less than all, of the Shares proposed to be transferred to any one or more of the proposed transferees, at the purchase price determined in accordance with **Section 7.C**.

C. ***Purchase Price***. The purchase price for the Shares purchased by the Company and/or its assignee(s) under this section shall be the price listed in the Holder's notice. If the price listed in the Holder's notice includes consideration other than cash, the cash equivalent value of the non-cash consideration shall be determined by the board of directors of the Company in its sole discretion.

D. ***Payment***. Payment of the purchase price shall be made, at the option of the Company and/or its assignee(s), in cash (by check), by cancellation of all or a portion of any outstanding indebtedness of the Holder to the Company and/or its assignee(s), or by any combination thereof within 30 days after receipt by the Company of the Holder's notice (or at such later date as is called for by such notice).

E. ***Holder's Right to Transfer***. If all of the Shares proposed in the notice to be transferred to a given proposed transferee are not purchased by the Company and/or its assignee(s) as provided in this section, then the Holder may sell or otherwise transfer such Shares to that proposed transferee; provided that: (i) the transfer is made only on the terms provided for in the notice, with the exception of the purchase price, which may be either the price listed in the notice or any higher price; (ii) such transfer is consummated within 60 days after the date the notice is delivered to the Company; (iii) the transfer is effected in accordance with any applicable securities laws, and if requested by the Company, the Holder shall have delivered an opinion of counsel acceptable to the Company to that effect; and (iv) the proposed transferee agrees in writing to receive and hold the Shares so transferred subject to all of the provisions of this Agreement, including but not limited to this section, and there shall be no further transfer of such Shares except in accordance with the terms of this section. If any Shares described in a notice are not transferred to the proposed transferee within the period provided above, then before any such Shares may be transferred, a new notice shall be given to the Company, and the Company and/or its assignees shall again be offered the right of first refusal described in this section.

F. ***Involuntary Transfers***. Subject to the other provisions of this **Section 7**, in the event, at any time after the date of this Agreement, of any transfer by operation of law or other involuntary transfer (including, but not limited to, transfers by operation of law or other involuntary transfers in connection with a divorce, dissolution, legal separation or annulment) of all or a portion of the Shares by the record holder thereof that does not occur in accordance with the other provisions of this **Section 7**, the Company shall have the right to purchase all of the Shares transferred at the greater of the purchase price paid by the Purchaser pursuant to this Agreement or the fair market value of the Shares on the date of transfer (as determined by the board of directors of the Company). Upon such a transfer, the persons transferring or acquiring the Shares shall promptly notify the Secretary of the Company in writing of such transfer. The right to purchase such Shares shall be provided to the Company for a period of 30 days following receipt by the Company of written notice of the transfer.

G. ***Exception for Certain Family Transfers***. Notwithstanding anything to the contrary contained elsewhere in this section, the transfer of any or all of the Shares during the Holder's lifetime (except in connection with a divorce, dissolution, legal separation or annulment), or on the Holder's death by will or intestacy, to (i) the Holder's spouse or domestic partner; (ii) the Holder's lineal descendants or antecedents, siblings, aunts, uncles, cousins,

nieces and nephews (including adoptive relationships and step relationships), and their spouses or domestic partners; (iii) the lineal descendants or antecedents, siblings, cousins, aunts, uncles, nieces and nephews of Holder's spouse or domestic partner (including adoptive relationships and step relationships), and their spouses or domestic partners; and (iv) a trust or other similar estate planning vehicle for the benefit of the Holder or any such person, shall be exempt from the provisions of this section; *provided* that, in each such case, the transferee agrees in writing to receive and hold the Shares so transferred subject to all of the provisions of this Agreement, including but not limited to this section, and there shall be no further transfer of such Shares except in accordance with the terms of this section; and *provided further*, that without the prior written consent of the Company, which may be withheld in the sole discretion of the Company, no more than three transfers may be made pursuant to this section, including all transfers by the Holder and all transfers by any transferee. For purposes of this Agreement, a person will be deemed to be a "domestic partner" of another person if the two persons (1) reside in the same residence and plan to do so indefinitely, (2) have resided together for at least one year, (3) are each at least 18 years of age and mentally competent to consent to contract, (4) are not blood relatives any closer than would prohibit legal marriage in the state in which they reside, (5) are financially interdependent, as demonstrated to the reasonable satisfaction of the Company and (6) have each been the sole spouse equivalent of the other for the year prior to the transfer and plan to remain so indefinitely; provided that a person will not be considered a domestic partner if he or she is married to another person or has any other spouse equivalent.

H. ***Termination of Right of First Refusal***. The rights contained in this section shall terminate as to all Shares purchased hereunder upon the earlier of: (i) the closing date of the first sale of Common Stock of the Company to the general public pursuant to a registration statement filed with and declared effective by the Securities and Exchange Commission under the Securities Act, and (ii) the closing date of a Change of Control pursuant to which the holders of the outstanding voting securities of the Company receive securities of a class registered pursuant to Section 12 of the Securities Exchange Act of 1934, as amended.

8. **Escrow**.

A. ***Deposit***. As security for the faithful performance of this Agreement, the Purchaser agrees, immediately upon receipt of any certificate(s) evidencing the Shares, to deliver such certificate(s) together with a stock power in the form of Exhibit B attached to this Agreement, executed by the Purchaser and by the Purchaser's spouse, if any (with the date and number of Shares left blank) in the form of Exhibit E attached hereto, to the Secretary of the Company or to another designee of the Company (the "***Escrow Agent***"). These documents shall be held by the Escrow Agent pursuant to the Amended and Restated Joint Escrow Instructions of the Company and the Purchaser set forth in Exhibit C attached to this Agreement, which instructions are incorporated into this Agreement by this reference, and which instructions were delivered to the Escrow Agent after the Closing.

B. ***Rights in Escrow Shares***. Subject to the terms hereof, the Purchaser shall have all the rights of a stockholder with respect to such Shares while they are held in escrow, including without limitation, the right to vote the Shares. If, from time to time during the term of the Company's Repurchase Option, there is (i) any stock dividend, stock split or other change in the Shares, (ii) any dividend of cash or other property on the Shares, or (iii) any merger or sale of all

or substantially all of the assets or other acquisition of the Company, any and all new, substituted or additional securities or cash or other consideration to which the Purchaser is entitled by reason of the Purchaser's ownership of the Shares shall immediately become subject to this escrow, deposited with the Escrow Agent and included thereafter as "***Shares***" for purposes of this Agreement and the Company's Repurchase Option.

9. ***Tax Consequences***. The Purchaser has reviewed with the Purchaser's own tax advisors the federal, state, local and foreign tax consequences of this investment and the transactions contemplated by this Agreement. The Purchaser is relying solely on such advisors and not on any statements or representations of the Company or any of its agents. The Purchaser understands that the Purchaser (and not the Company) shall be responsible for any tax liability that may arise as a result of the transactions contemplated by this Agreement. The Purchaser understands that Section 83 of the Code, taxes as ordinary income the difference between the purchase price for the Shares and the fair market value of the Shares as of the date any restrictions on the Shares lapse. In this context, "***restriction***" includes the right of the Company to buy back the Shares pursuant to the Repurchase Option. The Purchaser elected to be taxed at the time the Shares are purchased rather than when and as the Repurchase Option expires by filing an election under Section 83(b) of the Code with the IRS within 30 days from the date of purchase of the Shares at the Closing. **THE FORM FOR MAKING THIS SECTION 83(B) ELECTION IS ATTACHED TO THIS AGREEMENT AS EXHIBIT D AND THE PURCHASER (AND NOT THE COMPANY OR ANY OF ITS AGENTS) SHALL BE SOLELY RESPONSIBLE FOR APPROPRIATELY FILING SUCH FORM, EVEN IF THE PURCHASER REQUESTS THE COMPANY OR ITS AGENTS TO MAKE THIS FILING ON THE PURCHASER'S BEHALF**.

10. **General Provisions**.

A. ***Choice of Law***. This Agreement shall be governed by the internal substantive laws, but not the choice of law rules, of California.

B. ***Integration***. This Agreement, including all exhibits hereto, represents the entire agreement between the parties with respect to the purchase of the Shares by the Purchaser and supersedes and replaces any and all prior written or oral agreements regarding the subject matter of this Agreement including, but not limited to, any representations made during any interviews, relocation discussions or negotiations whether written or oral.

C. ***Notices***. Any notice, demand, offer, request or other communication required or permitted to be given by either the Company or the Purchaser pursuant to the terms of this Agreement shall be in writing and shall be deemed effectively given the earlier of (i) when received, (ii) when delivered personally, (iii) one business day after being delivered by facsimile (with receipt of appropriate confirmation), (iv) one business day after being deposited with an overnight courier service or (v) four days after being deposited in the U.S. mail, First Class with postage prepaid and return receipt requested, and addressed to the parties at the addresses provided to the Company (which the Company agrees to disclose to the other parties upon request) or such other address as a party may request by notifying the other in writing.

D. ***Successors***. Any successor to the Company (whether direct or indirect and whether by purchase, merger, consolidation, liquidation or otherwise) to all or substantially all of the Company's business and/or assets shall assume the obligations under this Agreement and agree expressly to perform the obligations under this Agreement in the same manner and to the same extent as the Company would be required to perform such obligations in the absence of a succession. For all purposes under this Agreement, the term "***Company***" shall include any successor to the Company's business and/or assets which executes and delivers the assumption agreement described in this section or which becomes bound by the terms of this Agreement by operation of law. Subject to the restrictions on transfer set forth in this Agreement, this Agreement shall be binding upon the Purchaser and his or her heirs, executors, administrators, successors and assigns.

E. ***Assignment; Transfers***. Except as set forth in this Agreement, this Agreement, and any and all rights, duties and obligations hereunder, shall not be assigned, transferred, delegated or sublicensed by the Purchaser without the prior written consent of the Company. Any attempt by the Purchaser without such consent to assign, transfer, delegate or sublicense any rights, duties or obligations that arise under this Agreement shall be void. Except as set forth in this Agreement, any transfers in violation of any restriction upon transfer contained in any section of this Agreement shall be void, unless such restriction is waived in accordance with the terms of this Agreement.

F. ***Waiver***. Either party's failure to enforce any provision of this Agreement shall not in any way be construed as a waiver of any such provision, nor prevent that party from thereafter enforcing any other provision of this Agreement. The rights granted both parties hereunder are cumulative and shall not constitute a waiver of either party's right to assert any other legal remedy available to it.

G. ***Purchaser Investment Representations and Further Documents***. The Purchaser agrees upon request to execute any further documents or instruments necessary or reasonably desirable in the view of the Company to carry out the purposes or intent of this Agreement, including (but not limited to) the applicable exhibits and attachments to this Agreement.

H. ***Severability***. Should any provision of this Agreement be found to be illegal or unenforceable, the other provisions shall nevertheless remain effective and shall remain enforceable to the greatest extent permitted by law.

I. ***Rights as Stockholder***. Subject to the terms and conditions of this Agreement, the Purchaser shall have all of the rights of a stockholder of the Company with respect to the Shares from and after the date that the Purchaser delivers a fully executed copy of this Agreement (including the applicable exhibits and attachments to this Agreement) and full payment for the Shares to the Company, and until such time as the Purchaser disposes of the Shares in accordance with this Agreement. Upon such transfer, the Purchaser shall have no further rights as a holder of the Shares so purchased except (in the case of a transfer to the Company) the right to receive payment for the Shares so purchased in accordance with the provisions of this Agreement, and the Purchaser shall forthwith cause any certificate(s) evidencing the Shares so purchased to be surrendered to the Company for transfer or cancellation.

J. ***Adjustment for Stock Split***. All references to the number of Shares and the purchase price of the Shares in this Agreement shall be adjusted to reflect any stock split, stock dividend or other change in the Shares which may be made after the date of this Agreement.

K. ***Employment at Will***. THE PURCHASER ACKNOWLEDGES AND AGREES THAT THE VESTING OF SHARES PURSUANT TO THIS AGREEMENT IS EARNED ONLY BY CONTINUING SERVICE AS A SERVICE PROVIDER AT WILL (AND NOT THROUGH THE ACT OF BEING HIRED OR PURCHASING SHARES HEREUNDER). THE PURCHASER FURTHER ACKNOWLEDGES AND AGREES THAT THIS AGREEMENT, THE TRANSACTIONS CONTEMPLATED HEREUNDER AND THE VESTING SCHEDULE SET FORTH HEREIN DO NOT CONSTITUTE AN EXPRESS OR IMPLIED PROMISE OF CONTINUED ENGAGEMENT AS A SERVICE PROVIDER FOR THE VESTING PERIOD, OR FOR ANY PERIOD AT ALL, AND SHALL NOT INTERFERE WITH THE PURCHASER'S RIGHT OR THE COMPANY'S RIGHT TO TERMINATE THE PURCHASER'S RELATIONSHIP WITH THE COMPANY AT ANY TIME, WITH OR WITHOUT CAUSE OR NOTICE.

L. ***Arbitration and Equitable Relief***.

(1) *Arbitration*. IN CONSIDERATION OF THE PROMISES IN THIS AGREEMENT, THE PURCHASER AGREES THAT ANY AND ALL CONTROVERSIES, CLAIMS, OR DISPUTES WITH ANYONE (INCLUDING THE COMPANY AND ANY EMPLOYEE, OFFICER, DIRECTOR, SHAREHOLDER OR BENEFIT PLAN OF THE COMPANY IN THEIR CAPACITY AS SUCH OR OTHERWISE) ARISING OUT OF, RELATING TO, OR RESULTING FROM THIS AGREEMENT, SHALL BE SUBJECT TO BINDING ARBITRATION UNDER THE ARBITRATION RULES SET FORTH IN CALIFORNIA CODE OF CIVIL PROCEDURE SECTION 1280 THROUGH 1294.2, INCLUDING SECTION 1283.05 (THE "***RULES***") AND PURSUANT TO CALIFORNIA LAW, AND SHALL BE BROUGHT IN THE PURCHASER'S INDIVIDUAL CAPACITY, AND NOT AS A PLAINTIFF OR CLASS MEMBER IN ANY PURPORTED CLASS OR REPRESENTATIVE PROCEEDING. DISPUTES WHICH THE PURCHASER AGREES TO ARBITRATE, AND THEREBY AGREES TO WAIVE ANY RIGHT TO A TRIAL BY JURY, INCLUDE ANY STATUTORY CLAIMS UNDER STATE OR FEDERAL LAW, INCLUDING, BUT NOT LIMITED TO, CLAIMS UNDER TITLE VII OF THE CIVIL RIGHTS ACT OF 1964, THE AMERICANS WITH DISABILITIES ACT OF 1990, THE AGE DISCRIMINATION IN EMPLOYMENT ACT OF 1967, THE OLDER WORKERS BENEFIT PROTECTION ACT, THE WORKER ADJUSTMENT AND RETRAINING NOTIFICATION ACT, THE CALIFORNIA FAIR EMPLOYMENT AND HOUSING ACT, THE FAMILY AND MEDICAL LEAVE ACT, THE CALIFORNIA FAMILY RIGHTS ACT, THE CALIFORNIA LABOR CODE, CLAIMS OF HARASSMENT, DISCRIMINATION OR WRONGFUL TERMINATION AND ANY STATUTORY CLAIMS. THE PURCHASER FURTHER UNDERSTANDS THAT THIS AGREEMENT TO ARBITRATE ALSO APPLIES TO ANY DISPUTES THAT THE COMPANY MAY HAVE WITH THE PURCHASER.

(2) *Procedure*. THE PURCHASER AGREES THAT ANY ARBITRATION WILL BE ADMINISTERED BY THE AMERICAN ARBITRATION ASSOCIATION ("***AAA***") AND THAT THE NEUTRAL ARBITRATOR WILL BE SELECTED IN A MANNER CONSISTENT WITH ITS NATIONAL RULES FOR THE RESOLUTION OF EMPLOYMENT DISPUTES. THE PURCHASER AGREES THAT THE ARBITRATOR SHALL HAVE THE POWER TO DECIDE ANY MOTIONS BROUGHT BY ANY PARTY TO THE ARBITRATION, INCLUDING MOTIONS FOR SUMMARY JUDGMENT AND/OR ADJUDICATION AND MOTIONS TO DISMISS AND DEMURRERS, PRIOR TO ANY ARBITRATION HEARING. THE PURCHASER ALSO AGREES THAT THE ARBITRATOR SHALL HAVE THE POWER TO AWARD ANY REMEDIES, INCLUDING ATTORNEYS' FEES AND COSTS, AVAILABLE UNDER APPLICABLE LAW. THE PURCHASER UNDERSTANDS THAT THE COMPANY WILL PAY FOR ANY ADMINISTRATIVE OR HEARING FEES CHARGED BY THE ARBITRATOR OR AAA EXCEPT THAT THE PURCHASER SHALL PAY THE FIRST $125.00 OF ANY FILING FEES ASSOCIATED WITH ANY ARBITRATION THE PURCHASER INITIATES. THE PURCHASER AGREES THAT THE ARBITRATOR SHALL ADMINISTER AND CONDUCT ANY ARBITRATION IN A MANNER CONSISTENT WITH THE RULES AND THAT TO THE EXTENT THAT THE AAA'S NATIONAL RULES FOR THE RESOLUTION OF EMPLOYMENT DISPUTES CONFLICT WITH THE RULES, THE RULES SHALL TAKE PRECEDENCE. THE PURCHASER AGREES THAT THE DECISION OF THE ARBITRATOR SHALL BE IN WRITING.

(3) *Remedy*. EXCEPT AS PROVIDED BY THE RULES AND THIS AGREEMENT, ARBITRATION SHALL BE THE SOLE, EXCLUSIVE AND FINAL REMEDY FOR ANY DISPUTE BETWEEN THE PURCHASER AND THE COMPANY. ACCORDINGLY, EXCEPT AS PROVIDED FOR BY THE RULES AND THIS AGREEMENT, NEITHER THE PURCHASER NOR THE COMPANY WILL BE PERMITTED TO PURSUE COURT ACTION REGARDING CLAIMS THAT ARE SUBJECT TO ARBITRATION. NOTWITHSTANDING, THE ARBITRATOR WILL NOT HAVE THE AUTHORITY TO DISREGARD OR REFUSE TO ENFORCE ANY LAWFUL COMPANY POLICY, AND THE ARBITRATOR SHALL NOT ORDER OR REQUIRE THE COMPANY TO ADOPT A POLICY NOT OTHERWISE REQUIRED BY LAW WHICH THE COMPANY HAS NOT ADOPTED.

(4) *Availability of Injunctive Relief*. BOTH PARTIES AGREE THAT ANY PARTY MAY PETITION A COURT FOR INJUNCTIVE RELIEF AS PERMITTED BY THE RULES INCLUDING, BUT NOT LIMITED TO, WHERE EITHER PARTY ALLEGES OR CLAIMS A VIOLATION OF ANY CONFIDENTIAL INFORMATION OR INVENTION ASSIGNMENT AGREEMENT BETWEEN THE PURCHASER AND THE COMPANY OR ANY OTHER AGREEMENT REGARDING TRADE SECRETS, CONFIDENTIAL INFORMATION, NONSOLICITATION OR LABOR CODE §2870. BOTH PARTIES UNDERSTAND THAT ANY BREACH OR THREATENED BREACH OF SUCH AN AGREEMENT WILL CAUSE IRREPARABLE INJURY AND THAT MONEY DAMAGES WILL NOT PROVIDE AN ADEQUATE REMEDY THEREFOR AND BOTH PARTIES HEREBY CONSENT TO THE ISSUANCE OF AN INJUNCTION. IN THE EVENT EITHER PARTY SEEKS INJUNCTIVE RELIEF, THE PREVAILING PARTY SHALL BE ENTITLED TO RECOVER REASONABLE COSTS AND ATTORNEYS' FEES.

(5) *Administrative Relief*. THE PURCHASER UNDERSTANDS THAT THIS AGREEMENT DOES NOT PROHIBIT THE PURCHASER FROM PURSUING AN ADMINISTRATIVE CLAIM WITH A LOCAL, STATE OR FEDERAL ADMINISTRATIVE BODY SUCH AS THE DEPARTMENT OF FAIR EMPLOYMENT AND HOUSING, THE EQUAL EMPLOYMENT OPPORTUNITY COMMISSION OR THE WORKERS' COMPENSATION BOARD. THIS AGREEMENT DOES, HOWEVER, PRECLUDE THE PURCHASER FROM PURSUING COURT ACTION REGARDING ANY SUCH CLAIM.

(6) *Voluntary Nature of Agreement*. THE PURCHASER ACKNOWLEDGES AND AGREES THAT THE PURCHASER IS EXECUTING THIS AGREEMENT VOLUNTARILY AND WITHOUT ANY DURESS OR UNDUE INFLUENCE BY THE COMPANY OR ANYONE ELSE. THE PURCHASER FURTHER ACKNOWLEDGES AND AGREES THAT THE PURCHASER HAS CAREFULLY READ THIS AGREEMENT AND THAT THE PURCHASER HAS ASKED ANY QUESTIONS NEEDED FOR THE PURCHASER TO UNDERSTAND THE TERMS, CONSEQUENCES AND BINDING EFFECT OF THIS AGREEMENT AND FULLY UNDERSTANDS IT, INCLUDING THAT ***THE PURCHASER IS WAIVING THE PURCHASER'S RIGHT TO A JURY TRIAL***. FINALLY, THE PURCHASER AGREES THAT THE PURCHASER HAS BEEN PROVIDED AN OPPORTUNITY TO SEEK THE ADVICE OF AN ATTORNEY OF THE PURCHASER'S CHOICE BEFORE SIGNING THIS AGREEMENT.

M. ***Reliance on Counsel and Advisors***. The Purchaser acknowledges that Latham & Watkins LLP, is representing only the Company in this transaction. The Purchaser acknowledges that he has had the opportunity to review this Agreement, including all attachments hereto, and the transactions contemplated by this Agreement with his or her own legal counsel, tax advisors and other advisors. The Purchaser is relying solely on his own counsel and advisors and not on any statements or representations of the Company or its agents for legal or other advice with respect to this investment or the transactions contemplated by this Agreement.

N. ***Counterparts***. This Agreement may be executed in one or more counterparts, each of which will be deemed an original, but all of which together will constitute one and the same agreement. Facsimile copies of signed signature pages shall be binding originals.

(*signature page follows*)

The parties represent that they have read this Agreement in its entirety, have had an opportunity to obtain the advice of counsel prior to executing this Agreement and fully understand this Agreement. The Purchaser agrees to notify the Company of any change in his or her address below.

MATTHEW DAVIDSON

/s/ Matthew Davidson

XXX

VERRICA PHARMACEUTICALS INC.

/s/ Matthew Davidson
Matthew Davidson
President and Chief Executive Officer

XXX

[Signature Page to Amended and Restated Restricted Stock Purchase Agreement]

Exhibit A

INVESTMENT REPRESENTATION STATEMENT

PURCHASER	:	Matthew Davidson
COMPANY	:	Verrica Pharmaceuticals Inc.
SECURITY	:	Common Stock
AMOUNT	:	6,000,000 shares
DATE	:	August 8, 2013

In connection with the purchase of the above-listed shares, I, the undersigned purchaser, represent to the Company as follows:

1. ***The Company may rely on these representations***. I understand that the Company's sale of the shares to me has not been registered under the Securities Act of 1933, as amended (the "***Securities Act***") because the Company believes, relying in part on my representations in this document, that an exemption from such registration requirement is available for such sale. I understand that the availability of this exemption depends upon the representations I am making to the Company in this document being true and correct.

2. ***I am purchasing for investment***. I am purchasing the shares solely for investment purposes, and not for further distribution. My entire legal and beneficial ownership interest in the shares is being purchased and shall be held solely for my account, except to the extent I intend to hold the shares jointly with my spouse. I am not a party to, and do not presently intend to enter into, any contract or other arrangement with any other person or entity involving the resale, transfer, grant of participation with respect to or other distribution of any of the shares. My investment intent is not limited to my present intention to hold the shares for the minimum capital gains period specified under any applicable tax law, for a deferred sale, for a specified increase or decrease in the market price of the shares, or for any other fixed period in the future.

3. ***I can protect my own interests***. I can properly evaluate the merits and risks of an investment in the shares and can protect my own interests in this regard, whether by reason of my own business and financial expertise, the business and financial expertise of certain professional advisors unaffiliated with the Company with whom I have consulted, or my preexisting business or personal relationship with the Company or any of its officers, directors or controlling persons.

4. ***I am informed about the Company***. I am sufficiently aware of the Company's business affairs and financial condition to reach an informed and knowledgeable decision to acquire the shares. I have had opportunity to discuss the plans, operations and financial condition of the Company with its officers, directors or controlling persons, and have received all information I deem appropriate for assessing the risk of an investment in the shares.

5. ***I recognize my economic risk***. I realize that the purchase of the shares involves a high degree of risk, and that the Company's future prospects are uncertain. I am able to hold the shares indefinitely if required, and am able to bear the loss of my entire investment in the shares.

6. ***I know that the shares are restricted securities***. I understand that the shares are "restricted securities" in that the Company's sale of the shares to me has not been registered under the Securities Act in reliance upon an exemption for non-public offerings. In this regard, I also understand and agree that:

A. I must hold the shares indefinitely, unless any subsequent proposed resale by me is registered under the Securities Act, or unless an exemption from registration is otherwise available (such as Rule 144);

B. the Company is under no obligation to register any subsequent proposed resale of the shares by me; and

C. the certificate evidencing the shares will be imprinted with a legend which prohibits the transfer of the shares unless such transfer is registered or such registration is not required in the opinion of counsel for the Company.

7. ***I am familiar with Rule 144***. I am familiar with Rule 144 adopted under the Securities Act, which in some circumstances permits limited public resales of "restricted securities" like the shares acquired from an issuer in a non-public offering. I understand that my ability to sell the shares under Rule 144 in the future is uncertain, and may depend upon, among other things: (i)the availability of certain current public information about the Company; (ii) the resale occurring more than a specified period after my purchase and full payment (within the meaning of Rule 144) for the shares; and (iii) if I am an affiliate of the Company (A) the sale being made in an unsolicited "broker's transaction", transactions directly with a market maker or riskless principal transactions, as those terms are defined under the Securities Exchange Act of 1934, as amended, (B) the amount of shares being sold during any three-month period not exceeding the specified limitations stated in Rule 144, and (C) timely filing of a notice of proposed sale on Form 144, if applicable.

8. ***I know that Rule 144 may never be available***. I understand that the requirements of Rule 144 may never be met, and that the shares may never be saleable under the rule. I further understand that at the time I wish to sell the shares, there may be no public market for the Company's stock upon which to make such a sale, or the current public information requirements of Rule 144 may not be satisfied, either of which may preclude me from selling the shares under Rule 144 even if the relevant holding period had been satisfied.

9. ***I know that I am subject to further restrictions on resale***. I understand that in the event Rule 144 is not available to me, any future proposed sale of any of the shares by me will not be possible without prior registration under the Securities Act, compliance with some other registration exemption (which may or may not be available), or *each* of the following: (i) my written notice to the Company containing detailed information regarding the proposed sale, (ii) my providing an opinion of my counsel to the effect that such sale will not require registration, and (iii) the Company notifying me in writing that its counsel concurs in such opinion. I

understand that neither the Company nor its counsel is obligated to provide me with any such opinion. I understand that although Rule 144 is not exclusive, the Staff of the SEC has stated that persons proposing to sell private placement securities other than in a registered offering or pursuant to Rule 144 will have a substantial burden of proof in establishing that an exemption from registration is available for such offers or sales, and that such persons and their respective brokers who participate in such transactions do so at their own risk.

10. ***I know that I may have tax liability due to the uncertain value of the shares***. I understand that the board of directors believes its valuation of the shares represents a fair appraisal of their worth, but that it remains possible that, with the benefit of hindsight, the Internal Revenue Service may successfully assert that the value of the shares on the date of my purchase is substantially greater than the Board's appraisal. I understand that any additional value ascribed to the shares by such an IRS determination will constitute ordinary income to me as of the purchase date, and that any additional taxes and interest due as a result will be my sole responsibility payable only by me, and that the Company need not and will not reimburse me for that tax liability.

11. ***Residence***. The address of my principal residence is set forth on the signature page below.

By signing below, I acknowledge my agreement with each of the statements contained in this Investment Representation Statement as of the date first set forth above, and my intent for the Company to rely on such statements in issuing the shares to me.

Purchaser's Signature

Print Name

Address of Purchaser's principal residence:

XXX

Exhibit B

STOCK POWER AND ASSIGNMENT
SEPARATE FROM CERTIFICATE

FOR VALUE RECEIVED and pursuant to that certain Amended and Restated Restricted Stock Purchase Agreement dated as of December 1, 2015, the undersigned hereby sells, assigns and transfers unto_____ ,_____ (_____) shares of Common Stock of Verrica Pharmaceuticals Inc., a Delaware corporation, standing in the undersigned's name on the books of said corporation represented by certificate number_____delivered herewith, and does hereby irrevocably constitute and appoint the Corporate Secretary of Verrica Pharmaceuticals Inc. as attorney-in-fact, with full power of substitution, to transfer said stock on the books of said corporation.

Dated:

_____
(Signature)

_____
(Print Name)

_____
(Spouse's Signature, if any)

_____
(Print Spouse's Name)

This Assignment Separate From Certificate was executed in conjunction with the terms of an Amended and Restated Restricted Stock Purchase Agreement between the above assignor and the above corporation, dated as of [ ], 2015.

Instruction: Please do not fill in any blanks other than the signature and name lines.

Exhibit C

AMENDED AND RESTATED JOINT ESCROW INSTRUCTIONS

[ ], 2015

Verrica Pharmaceuticals Inc.
918 McCue Avenue
San Carlos, CA 94070

Attn: Corporate Secretary

Dear Secretary:

As Escrow Agent for both Verrica Pharmaceuticals Inc., a Delaware corporation (the "***Company***"), and Matthew Davidson (the "***Purchaser***"), you are hereby authorized and directed to hold the documents delivered to you pursuant to the terms of that certain Amended and Restated Restricted Stock Purchase Agreement (the "***Agreement***"), dated as of _____, 2013, to which a copy of these Amended and Restated Joint Escrow Instructions is attached, in accordance with the following instructions:

1. In the event that the Company and/or any assignee of the Company (referred to collectively for convenience herein as the "***Company***") exercises the Repurchase Option set forth in the Agreement, the Company shall give to the Purchaser and you a written notice specifying the number of shares of stock to be purchased, the purchase price, and the time for a closing hereunder at the principal office of the Company. The Purchaser and the Company hereby irrevocably authorize and direct you to close the transaction contemplated by such notice in accordance with the terms of said notice.

2. At the closing, you are directed (a) to date the stock assignments necessary for the transfer in question, (b) to fill in the number of shares being transferred, and (c) to deliver same, together with the certificate evidencing the shares of stock to be transferred, to the Company against the simultaneous delivery to you of the purchase price (by check or such other form of consideration mutually agreed to by the parties) for the number of shares of stock being purchased pursuant to the exercise of the Repurchase Option.

3. The Purchaser irrevocably authorizes the Company to deposit with you any certificates evidencing shares of stock to be held by you hereunder and any additions and substitutions to said shares as defined in the Agreement. The Purchaser does hereby irrevocably constitute and appoint you as his or her attorney-in-fact and agent for the term of this escrow to execute with respect to such securities all documents necessary or appropriate to make such securities negotiable and to complete any transaction herein contemplated. Subject to the provisions of this **paragraph 3**, the Purchaser shall exercise all rights and privileges of a stockholder of the Company while the stock is held by you.

4. Upon written request of the Purchaser after each successive one-year period from the date of the Agreement, unless the Repurchase Option has been exercised, you will deliver to the Purchaser a certificate or certificates representing so many shares of stock remaining in escrow as are not then subject to the Repurchase Option.

5. If at the time of termination of this escrow you should have in your possession any documents, securities, or other property belonging to the Purchaser, you shall deliver all of same to the Purchaser and shall be discharged of all further obligations hereunder.

6. Your duties hereunder may be altered, amended, modified or revoked only by a writing signed by all of the parties hereto.

7. You shall be obligated only for the performance of such duties as are specifically set forth herein and may rely and shall be protected in relying or refraining from acting on any instrument reasonably believed by you to be genuine and to have been signed or presented by the proper party or parties. You shall not be personally liable for any act you may do or omit to do hereunder as Escrow Agent or as attorney-in-fact for the Purchaser while acting in good faith and in the exercise of your own good judgment, and any act done or omitted by you pursuant to the advice of your own attorneys shall be conclusive evidence of such good faith.

8. The Company and the Purchaser hereby jointly and severally expressly agree to indemnify and hold harmless you and your designees against any and all claims, losses, liabilities, damages, deficiencies, costs and expenses, including reasonable attorneys' fees and expenses of investigation and defense incurred or suffered by you and your designees, directly or indirectly, as a result of any of your actions or omissions or those of your designees while acting in good faith and in the exercise of your judgment under the Agreement, these Amended and Restated Joint Escrow Instructions, exhibits hereto or written instructions from the Company or the Purchaser hereunder.

9. You are hereby expressly authorized to disregard any and all warnings given by any of the parties hereto or by any other person or corporation, excepting only orders or process of courts of law, and are hereby expressly authorized to comply with and obey orders, judgments or decrees of any court. In case you obey or comply with any such order, judgment or decree, you shall not be liable to any of the parties hereto or to any other person, firm or corporation by reason of such compliance, notwithstanding any such order, judgment or decree being subsequently reversed, modified, annulled, set aside, vacated or found to have been entered without jurisdiction.

10. You shall not be liable in any respect on account of the identity, authorities or rights of the parties executing or delivering or purporting to execute or deliver the Agreement or any documents or papers deposited or called for hereunder.

11. You shall be entitled to employ such legal counsel and other experts as you may deem necessary properly to advise you in connection with your obligations hereunder, may rely upon the advice of such counsel, and may pay such counsel reasonable compensation therefor. The Company shall reimburse you for any such disbursements.

12. Your responsibilities as Escrow Agent hereunder shall terminate if you shall resign by written notice to each party. In the event of any such termination, the Company shall appoint a successor Escrow Agent.

13. If you reasonably require other or further instruments in connection with these Joint Escrow Instructions or obligations in respect hereto, the necessary parties hereto shall join in furnishing such instruments.

14. It is understood and agreed that should any dispute arise with respect to the delivery and/or ownership or right of possession of the securities held by you hereunder, you are authorized and directed to retain in your possession without liability to anyone all or any part of said securities until such disputes shall have been settled either by mutual written agreement of the parties concerned or by a final order, decree or judgment of a court of competent jurisdiction after the time for appeal has expired and no appeal has been perfected, but you shall be under no duty whatsoever to institute or defend any such proceedings.

15. Any notice required or permitted hereunder shall be given in writing and shall be deemed effectively given upon personal delivery or four days following deposit in the United States Post Office, by registered or certified mail with postage and fees prepaid and return receipt requested, addressed to each of the other parties thereunto entitled at the following addresses, or at such other addresses as a party may designate by written notice to each of the other parties hereto.

COMPANY:	Verrica Pharmaceuticals Inc. XXX Attn: President
PURCHASER:	Matthew Davidson XXX
ESCROW AGENT:	Corporate Secretary XXX

16. By signing these Amended and Restated Joint Escrow Instructions, you become a party hereto only for the purpose of said Amended and Restated Joint Escrow Instructions; you do not become a party to the Agreement.

17. This instrument shall be binding upon and inure to the benefit of the parties hereto, and their respective successors and permitted assigns.

Very truly yours,

VERRICA PHARMACEUTICALS INC.

By: _____

Print Name: _____

Print Title: _____

PURCHASER:

MATTHEW DAVIDSON

_____

(Signature)

ESCROW AGENT:

_____

Allison Davidson, Corporate Secretary

(Signature page to Joint Escrow Instructions)

IF YOU WISH TO MAKE A SECTION 83(B) ELECTION, THE FILING OF SUCH ELECTION IS YOUR RESPONSIBILITY.

THE FORM FOR MAKING THIS SECTION 83(B) ELECTION IS ATTACHED TO THIS AGREEMENT AS EXHIBIT D.

YOU MUST FILE THIS FORM WITHIN 30 DAYS OF PURCHASING THE SHARES.

YOU (AND NOT THE COMPANY OR ANY OF ITS AGENTS) SHALL BE SOLELY RESPONSIBLE FOR FILING SUCH FORM WITH THE IRS, EVEN IF YOU REQUEST THE COMPANY OR ITS AGENTS TO MAKE THIS FILING ON YOUR BEHALF AND EVEN IF THE COMPANY OR ITS AGENTS HAVE PREVIOUSLY MADE THIS FILING ON YOUR BEHALF.

The election should be filed by mailing a signed election form by certified mail, return receipt requested to the IRS Service Center where you file your tax returns. See <www.irs.gov>

Exhibit D

ELECTION UNDER SECTION 83(b) OF THE INTERNAL REVENUE CODE OF 1986, AS AMENDED

The undersigned taxpayer hereby elects, pursuant to Section 83(b) of the Internal Revenue Code of 1986, as amended, to include in his or her gross income for the current taxable year, the amount of any compensation taxable to him or her in connection with his or her receipt of the property described below:

1. The name, address and taxpayer identification number of the undersigned are as follows:

NAME OF TAXPAYER: Matthew Davidson SPOUSE: Allison Davidson

TAXPAYER'S ADDRESS: XXX

TAXPAYER ID #: SPOUSE'S ID #:

2. The property with respect to which the election is made is described as follows: 6,000,000 shares (the "***Shares***") of the Common Stock of Verrica Pharmaceuticals Inc. (the "***Company***").

3. The date on which the property was transferred is: August 8, 2013.

4. The taxable year for which the election is made is: 2013.

5. The property is subject to the following restrictions: The Shares may be repurchased by the Company, or its assignee, upon the occurrence of certain events. This right lapses with regard to a portion of the Shares over time.

6. The fair market value at the time of transfer, determined without regard to any restriction other than a restriction which by its terms will never lapse, of such property is: $600.00.

7. The amount, if any, paid for such property: $600.00.

The undersigned has submitted a copy of this statement to the person for whom the services were performed in connection with the undersigned's receipt of the above-described property. The transferee of such property is the person performing the services in connection with the transfer of said property.

The undersigned understand(s) that the foregoing election may not be revoked except with the consent of the Commissioner.

Dated: August 8, 2013

Matthew Davidson, Taxpayer

The undersigned spouse of taxpayer joins in this election.

Dated: August 8, 2013

Allison Davidson, Spouse of Taxpayer

Exhibit E

SPOUSAL CONSENT

I, Allison Davidson, spouse of Matthew Davidson, have read and approve of the foregoing Amended and Restated Restricted Stock Purchase Agreement, dated as of December 1, 2015, together with all exhibits and attachments thereto (collectively, the "***Agreement***"), by and between my spouse and Verrica Pharmaceuticals Inc., a Delaware corporation (the "***Company***"). In consideration of the Company's granting of the right to Matthew Davidson to purchase 5,819,783 shares of Common Stock of the Company as set forth in the Agreement and after giving effect to the Repurchase Closing (as defined in the Agreement), I hereby appoint Matthew Davidson as my attorney-in-fact in respect to the exercise or waiver of any rights under the Agreement, and agree to be bound by the provisions of the Agreement insofar as I may have any rights in said Agreement or any shares issued pursuant thereto under the community property laws of the State of California, or under similar laws relating to marital property in effect in the state of our residence as of the date of the signing of the foregoing Agreement.

Dated: , 2015

"Spouse of Purchaser"

_____

(Signature)

_____

(Print Name)

EXHIBIT 10.15

VERRICA PHARMACEUTICALS INC.

2014 EQUITY INCENTIVE PLAN

RESTRICTED STOCK PURCHASE AGREEMENT

Unless otherwise defined herein, the terms defined in the 2014 Equity Incentive Plan (the "Plan") shall have the same defined meanings in this Restricted Stock Purchase Agreement (the "Agreement").

I. NOTICE OF GRANT OF RESTRICTED STOCK

Name: GLENN OCLASSEN

Address: XXX

The undersigned Participant has been granted a right to purchase Common Stock of the Company, subject to the terms and conditions of the Plan and this Agreement, as follows:

Date of Grant:	August 7th, 2014
Vesting Commencement Date:	August 7th, 2014
Purchase Price per Share:	$ 0.01
Total Number of Shares Granted:	142,132
Total Purchase Price:	$ 1,421.32
Expiration Date:	30 days after Date of Grant

Vesting Schedule:

So long as the Purchaser's continuous status as a Service Provider has not yet terminated in each such instance, Shares shall be released from the Repurchase Option at the rate of 1/24th of the Shares each month starting on the first month after the Vesting Commencement Date and continuing each month thereafter (on the same day of each month as the Vesting Commencement Date), until all Shares have been released from the Repurchase Option.

Upon a "Change in Control," 100% of the Shares shall immediately be released from the Repurchase Option.

Any of the Shares which have not yet been released from the Company's Repurchase Option are referred to herein as "Unreleased Shares." The Shares which have been released from the Company's Repurchase Option shall be delivered to Participant at Participant's request (see Section 11 of Part 0 of this Agreement).

YOU MUST EXERCISE THIS RESTRICTED STOCK AWARD BEFORE THE EXPIRATION DATE OR IT WILL TERMINATE AND YOU WILL HAVE NO FURTHER RIGHT TO PURCHASE THE SHARES.

II. AGREEMENT

1. Sale of Stock. The Administrator of the Company hereby agrees to sell to Participant named in the Notice of Grant of Restricted Stock in Part I of this Agreement ("Participant"), and Participant hereby agrees to purchase the number of Shares set forth in the Notice of Grant of Restricted Stock, at the Purchase Price per Share set forth in the Notice of Grant of Restricted Stock (the "Purchase Price"), and subject to the terms and conditions of the Plan, which is incorporated herein by reference. Subject to Section 18 of the Plan, in the event of a conflict between the terms and conditions of the Plan and this Agreement, the terms and conditions of the Plan shall prevail.

2. Payment of Purchase Price. Participant herewith delivers to the Company the aggregate Purchase Price for the Shares by cash or check, together with any and all withholding taxes due in connection with the purchase of the Shares.

3. Participant's Representations. In the event the Shares have not been registered under the Securities Act of 1933, as amended, at the time this Restricted Stock Award is exercised, Participant shall, if required by the Company, concurrently with the exercise of all or any portion of this Restricted Stock Award, deliver to the Company his or her Investment Representation Statement in the form attached hereto as Exhibit A.

4. Lock-Up Period. Participant hereby agrees that Participant shall not offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any Common Stock (or other securities) of the Company or enter into any swap, hedging or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of any Common Stock (or other securities) of the Company held by Participant (other than those included in the registration) for a period specified by the representative of the underwriters of Common Stock (or other securities) of the Company not to exceed one hundred and eighty (180) days following the effective date of any registration statement of the Company filed under the Securities Act (or such other period as may be requested by the Company or the underwriters to accommodate regulatory restrictions on (i) the publication or other distribution of research reports and (ii) analyst recommendations and opinions, including, but not limited to, the restrictions contained in NASD Rule 2711(f)(4) or NYSE Rule 472(f)(4), or any successor provisions or amendments thereto).

Participant agrees to execute and deliver such other agreements as may be reasonably requested by the Company or the underwriter which are consistent with the foregoing or which are necessary to give further effect thereto. In addition, if requested by the Company or the representative of the underwriters of Common Stock (or other securities) of the Company, Participant shall provide, within ten (10) days of such request, such information as may be required by the Company or such representative in connection with the completion of any public offering of the Company's securities pursuant to a registration statement filed under the Securities Act. The

obligations described in this Section 4 shall not apply to a registration relating solely to employee benefit plans on Form S-1 or Form S-8 or similar forms that may be promulgated in the future, or a registration relating solely to a Commission Rule 145 transaction on Form S-4 or similar forms that may be promulgated in the future. The Company may impose stop-transfer instructions with respect to the shares of Common Stock (or other securities) subject to the foregoing restriction until the end of said one hundred and eighty (180) day (or other) period. Participant agrees that any transferee of the Restricted Stock Award or shares acquired pursuant to the Restricted Stock Award shall be bound by this Section 4.

5. Non-Transferability of Restricted Stock. This Restricted Stock Award may not be transferred in any manner otherwise than by will or by the laws of descent or distribution and may be exercised during the lifetime of Participant only by Participant. The terms of the Plan and this Agreement shall be binding upon the executors, administrators, heirs, successors and assigns of Participant.

6. Tax Consequences. Participant has reviewed with Participant's own tax advisors the federal, state, local and foreign tax consequences of this investment and the transactions contemplated by this Agreement. Participant is relying solely on such advisors and not on any statements or representations of the Company or any of its agents. Participant understands that Participant (and not the Company) shall be responsible for Participant's own tax liability that may arise as a result of the transactions contemplated by this Agreement. Participant understands that Section 83 of the Internal Revenue Code of 1986, as amended (the "Code"), taxes as ordinary income the difference between the purchase price for the Shares and the Fair Market Value of the Shares as of the date any restrictions on the Shares lapse. In this context, "restriction" includes the right of the Company to buy back the Shares pursuant to the Repurchase Option. Participant understands that Participant may elect to be taxed at the time the Shares are purchased rather than when and as the Repurchase Option expires by filing an election under Section 83(b) of the Code with the IRS within thirty (30) days from the date of purchase. The form for making this election is attached as Exhibit B-3 hereto.

PARTICIPANT ACKNOWLEDGES THAT IT IS PARTICIPANT'S SOLE RESPONSIBILITY AND NOT THE COMPANY'S TO FILE TIMELY THE ELECTION UNDER SECTION 83(b), EVEN IF PARTICIPANT REQUESTS THE COMPANY OR ITS REPRESENTATIVES TO MAKE THIS FILING ON PARTICIPANT'S BEHALF.

7. Tax Withholding. Pursuant to such procedures as the Administrator may specify from time to time, the Company shall withhold the minimum amount required to be withheld for the payment of income, employment and other taxes which the Company determines must be withheld (the "Withholding Taxes") with respect to Shares released from the Company's Repurchase Option by, in the Administrator's discretion: (i) withholding otherwise deliverable Shares upon release from the Company's Repurchase Option having a Fair Market Value equal the amount of such Withholding Taxes, (ii) withholding the amount of such Withholding Taxes from Participant's paycheck(s), (iii) requiring Participant to make appropriate arrangements with the Company (or the Parent or Subsidiary employing or retaining Participant) for the satisfaction of all Withholding Taxes, or (iv) a combination of the foregoing. The Company shall not retain fractional Shares to satisfy any portion of the Withholding Taxes. Accordingly, if any withholding is done through the

withholding of Shares, Participant shall pay to the Company an amount in cash sufficient to satisfy the remaining Withholding Taxes due and payable as a result of the Company not retaining fractional Shares. Should the Company be unable to procure such cash amounts from Participant, Participant agrees and acknowledges that Participant is giving the Company permission to withhold from Participant's paycheck(s) an amount equal to the remaining Withholding Taxes due and payable as a result of the Company not retaining fractional Shares. Participant acknowledges and agrees that the Company may refuse to honor the exercise and refuse to deliver the Shares if such withholding amounts are not delivered at the time of purchase.

8. No Guarantee of Continued Service. PARTICIPANT ACKNOWLEDGES AND AGREES THAT THE RELEASE OF SHARES FROM THE REPURCHASE OPTION OF THE COMPANY PURSUANT TO THE VESTING SCHEDULE HEREOF IS EARNED ONLY BY CONTINUING AS A SERVICE PROVIDER AT THE WILL OF THE COMPANY (OR THE PARENT OR SUBSIDIARY EMPLOYING OR RETAINING PARTICIPANT) AND NOT THROUGH THE ACT OF BEING HIRED OR PURCHASING SHARES HEREUNDER. PARTICIPANT FURTHER ACKNOWLEDGES AND AGREES THAT THIS AGREEMENT, THE TRANSACTIONS CONTEMPLATED HEREUNDER AND THE VESTING SCHEDULE SET FORTH HEREIN DO NOT CONSTITUTE AN EXPRESS OR IMPLIED PROMISE OF CONTINUED ENGAGEMENT AS A SERVICE PROVIDER FOR THE VESTING PERIOD, FOR ANY PERIOD, OR AT ALL, AND SHALL NOT INTERFERE IN ANY WAY WITH PARTICIPANT'S RIGHT OR THE RIGHT OF THE COMPANY (OR THE PARENT OR SUBSIDIARY EMPLOYING OR RETAINING PARTICIPANT) TO TERMINATE PARTICIPANT'S RELATIONSHIP AS A SERVICE PROVIDER AT ANY TIME, WITH OR WITHOUT CAUSE.

9. Repurchase Option.

(a) In the event Participant's continuous status as a Service Provider terminates for any or no reason (including death or Disability), the Company shall, upon the date of such termination (as reasonably fixed and determined by the Company), have an irrevocable, exclusive option for a period of ninety (90) days from such date to repurchase up to that number of Shares which constitute the Unreleased Shares (as defined in Part I of this Agreement) at the Purchase Price per share (the "Repurchase Price") (the "Repurchase Option").

(b) The Repurchase Option shall be exercised by the Company by delivering written notice to Participant or Participant's executor (with a copy to the Escrow Holder (as defined in Section 11)) AND, at the Company's option, (i) by delivering to Participant or Participant's executor a check in the amount of the aggregate Repurchase Price, or (ii) by the Company canceling an amount of Participant's indebtedness to the Company equal to the aggregate Repurchase Price, or (iii) by a combination of (i) and (ii) so that the combined payment and cancellation of indebtedness equals such aggregate Repurchase Price. Upon delivery of such notice and the payment of the aggregate Repurchase Price in any of the ways described above, the Company shall become the legal and beneficial owner of the Unreleased Shares being repurchased and all rights and interests therein or relating thereto, and the Company shall have the right to retain and transfer to its own name the number of Unreleased Shares being repurchased by the Company.

(c) Whenever the Company shall have the right to repurchase the Unreleased Shares hereunder, the Company may designate and assign one or more employees, officers, directors or shareholders of the Company or other persons or organizations to exercise all or a part of the Company's Repurchase Option to purchase all or a part of the Unreleased Shares. If the Fair Market Value of the Unreleased Shares to be repurchased on the date of such designation or assignment (the "Repurchase FMV") exceeds the aggregate Repurchase Price of the Unreleased Shares, then each such designee or assignee shall pay the Company cash equal to the difference between the Repurchase FMV and the aggregate Repurchase Price of Unreleased Shares to be purchased.

(d) If the Company or its assignee does not elect to exercise the Repurchase Option conferred above by giving the requisite notice within ninety (90) days following Participant's termination as a Service Provider, the Repurchase Option shall terminate.

10. Restriction on Transfer. Except for the escrow described in Section 11 or transfer of the Shares to the Company or its assignees contemplated by this Agreement, none of the Shares or any beneficial interest therein shall be transferred, encumbered or otherwise disposed of in any way until the release of such Shares from the Company's Repurchase Option in accordance with the provisions of this Agreement, other than by will or the laws of descent and distribution. Any distribution or delivery to be made to Participant under this Agreement shall, if Participant is then deceased, be made to Participant's designated beneficiary, or if no beneficiary survives Participant, to the administrator or executor of Participant's estate. Any such transferee must furnish the Company with (a) written notice of his or her status as transferee, and (b) evidence satisfactory to the Company to establish the validity of the transfer and compliance with any laws or regulations pertaining to said transfer.

11. Escrow of Shares.

(a) To ensure the availability for delivery of Participant's Unreleased Shares upon exercise of the Repurchase Option by the Company, Participant will, upon execution of this Agreement, deliver and deposit with an escrow holder designated by the Company (the "Escrow Holder") the share certificates representing the Unreleased Shares, together with the Assignment Separate from Certificate (the "Stock Assignment") duly endorsed in blank, attached hereto as Exhibit B-1. The Unreleased Shares and Stock Assignment shall be held by the Escrow Holder, pursuant to the Joint Escrow Instructions of the Company and Participant attached as Exhibit B-2 hereto, until such time as the Company's Repurchase Option expires.

(b) The Escrow Holder shall not be liable for any act it may do or omit to do with respect to holding the Unreleased Shares in escrow and while acting in good faith and in the exercise of its judgment.

(c) If the Company or any assignee exercises its Repurchase Option hereunder, the Escrow Holder, upon receipt of written notice of such option exercise from the proposed transferee, shall take all steps necessary to accomplish such transfer. Participant hereby appoints the Escrow Holder with full power of substitution, as Participant's true and lawful attorney-in-fact with irrevocable power and authority in the name and on behalf of Participant to take any action and execute all documents and instruments, including, without limitation, stock powers which may be necessary to transfer the certificate or certificates evidencing such Unreleased Shares to the Company upon such termination.

(d) When the Repurchase Option has been exercised or expires unexercised or a portion of the Shares has been released from such Repurchase Option, upon Participant's request the Escrow Holder shall promptly cause a new certificate to be issued for such released Shares and shall deliver such certificate to the Company or Participant, as the case may be.

(e) Subject to the terms hereof, Participant shall have all the rights of a shareholder with respect to such Shares while they are held in escrow, including without limitation, the right to vote the Shares and receive any cash dividends declared thereon.

(f) In the event of any merger, reorganization, consolidation, recapitalization, separation, liquidation, stock dividend, split-up, share combination, or other change in the corporate structure of the Company affecting the Common Stock, the Shares shall be increased, reduced or otherwise changed, and by virtue of any such change Participant shall in his or her capacity as owner of Unreleased Shares that have been awarded to him or her be entitled to new or additional or different shares of stock, cash or securities (other than rights or warrants to purchase securities); such new or additional or different shares, cash or securities shall thereupon be considered to be "Unreleased Shares" and shall be subject to all of the conditions and restrictions which were applicable to the Unreleased Shares pursuant to this Agreement. If Participant receives rights or warrants with respect to any Unreleased Shares, such rights or warrants may be held or exercised by Participant, provided that until such exercise any such rights or warrants and after such exercise any shares or other securities acquired by the exercise of such rights or warrants shall be considered to be Unreleased Shares and shall be subject to all of the conditions and restrictions which were applicable to the Unreleased Shares pursuant to this Agreement. The Administrator in its absolute discretion at any time may accelerate the vesting of all or any portion of such new or additional shares of stock, cash or securities, rights or warrants to purchase securities or shares or other securities acquired by the exercise of such rights or warrants.

12. Company's Right of First Refusal. Subject to Section 10, before any Shares held by Participant or any transferee (either being sometimes referred to herein as the "Holder") may be sold or otherwise transferred (including transfer by gift or operation of law), the Company or its assignee(s) shall have a right of first refusal to purchase the Shares on the terms and conditions set forth in this Section 12 (the "Right of First Refusal").

(a) Notice of Proposed Transfer. The Holder of the Shares shall deliver to the Company a written notice (the "Notice") stating: (i) the Holder's bona fide intention to sell or otherwise transfer such Shares; (ii) the name of each proposed purchaser or other transferee ("Proposed Transferee"); (iii) the number of Shares to be transferred to each Proposed Transferee; and (iv) the bona fide cash price or other consideration for which the Holder proposes to transfer the Shares (the "Offered Price"), and the Holder shall offer the Shares at the Offered Price to the Company or its assignee(s).

(b) Exercise of Right of First Refusal. At any time within thirty (30) days after receipt of the Notice, the Company and/or its assignee(s) may, by giving written notice to the Holder, elect to purchase all, but not less than all, of the Shares proposed to be transferred to any one or more of the Proposed Transferees, at the purchase price determined in accordance with subsection (c) below.

(c) Purchase Price. The purchase price ("Right of First Refusal Price") for the Shares purchased by the Company or its assignee(s) under this Section 12 shall be the Offered Price. If the Offered Price includes consideration other than cash, the cash equivalent value of the non-cash consideration shall be determined by the Board in good faith.

(d) Payment. Payment of the Right of First Refusal Price shall be made, at the option of the Company or its assignee(s), in cash (by check), by cancellation of all or a portion of any outstanding indebtedness of the Holder to the Company (or, in the case of repurchase by an assignee, to the assignee), or by any combination thereof within thirty (30) days after receipt of the Notice or in the manner and at the times set forth in the Notice.

(e) Holder's Right to Transfer. If all of the Shares proposed in the Notice to be transferred to a given Proposed Transferee are not purchased by the Company and/or its assignee(s) as provided in this Section 12, then the Holder may sell or otherwise transfer such Shares to that Proposed Transferee at the Offered Price or at a higher price, provided that such sale or other transfer is consummated within one hundred and twenty (120) days after the date of the Notice, that any such sale or other transfer is effected in accordance with any applicable securities laws and that the Proposed Transferee agrees in writing that the provisions of this Section 12 shall continue to apply to the Shares in the hands of such Proposed Transferee. If the Shares described in the Notice are not transferred to the Proposed Transferee within such period, a new Notice shall be given to the Company, and the Company and/or its assignees shall again be offered the Right of First Refusal before any Shares held by the Holder may be sold or otherwise transferred.

(f) Exception for Certain Family Transfers. Anything to the contrary contained in this Section 12 notwithstanding, the transfer of any or all of the Shares during Participant's lifetime or on Participant's death by will or intestacy to Participant's immediate family or a trust for the benefit of Participant's immediate family shall be exempt from the provisions of this Section 12. "Immediate Family" as used herein shall mean spouse, lineal descendant or antecedent, father, mother, brother or sister. In such case, the transferee or other recipient shall receive and hold the Shares so transferred subject to the provisions of this Agreement, including but not limited to this Section 12 and Section 9, and there shall be no further transfer of such Shares except in accordance with the terms of this Section 12.

(g) Termination of Right of First Refusal. The Right of First Refusal shall terminate as to any Shares upon the earlier of (i) the first sale of Common Stock of the Company to the general public, or (ii) a Change in Control in which the successor corporation has equity securities that are publicly traded.

13. Restrictive Legends and Stop-Transfer Orders.

(a) Legends. Participant understands and agrees that the Company shall cause the legends set forth below or legends substantially equivalent thereto, to be placed upon any certificate(s) evidencing ownership of the Shares together with any other legends that may be required by the Company or by state or federal securities laws:

THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933 (THE "ACT") AND MAY NOT BE OFFERED, SOLD OR OTHERWISE TRANSFERRED, PLEDGED OR HYPOTHECATED UNLESS AND UNTIL REGISTERED UNDER THE ACT OR, IN THE OPINION OF COUNSEL SATISFACTORY TO THE ISSUER OF THESE SECURITIES, SUCH OFFER, SALE OR TRANSFER, PLEDGE OR HYPOTHECATION IS IN COMPLIANCE THEREWITH.

THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO CERTAIN RESTRICTIONS ON TRANSFER, A RIGHT OF FIRST REFUSAL, AND A REPURCHASE OPTION HELD BY THE ISSUER OR ITS ASSIGNEE(S) AS SET FORTH IN THE RESTRICTED STOCK PURCHASE AGREEMENT BETWEEN THE ISSUER AND THE ORIGINAL HOLDER OF THESE SHARES, A COPY OF WHICH MAY BE OBTAINED AT THE PRINCIPAL OFFICE OF THE ISSUER. SUCH TRANSFER RESTRICTIONS, RIGHT OF FIRST REFUSAL AND REPURCHASE OPTION ARE BINDING ON TRANSFEREES OF THESE SHARES.

THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO RESTRICTIONS ON TRANSFER FOR A PERIOD OF TIME FOLLOWING THE EFFECTIVE DATE OF THE UNDERWRITTEN PUBLIC OFFERING OF THE COMPANY'S SECURITIES SET FORTH IN AN AGREEMENT BETWEEN THE ISSUER AND THE ORIGINAL HOLDER OF THESE SHARES AND MAY NOT BE SOLD OR OTHERWISE DISPOSED OF BY THE HOLDER PRIOR TO THE EXPIRATION OF SUCH PERIOD WITHOUT THE CONSENT OF THE COMPANY OR THE MANAGING UNDERWRITER.

(b) Stop-Transfer Notices. Participant agrees that, in order to ensure compliance with the restrictions referred to herein, the Company may issue appropriate "stop transfer" instructions to its transfer agent, if any, and that, if the Company transfers its own securities, it may make appropriate notations to the same effect in its own records.

(c) Refusal to Transfer. The Company shall not be required (i) to transfer on its books any Shares that have been sold or otherwise transferred in violation of any of the provisions of this Agreement or (ii) to treat as owner of such Shares or to accord the right to vote or pay dividends to any purchaser or other transferee to whom such Shares shall have been so transferred.

14. Notices. Any notice, demand or request required or permitted to be given by either the Company or Participant pursuant to the terms of this Agreement shall be in writing and shall be deemed given when delivered personally or deposited in the U.S. mail, First Class with postage prepaid, and addressed to the parties at the addresses of the parties set forth at the end of this Agreement or such other address as a party may request by notifying the other in writing.

Any notice to the Escrow Holder shall be sent to the Company's address with a copy to the other party not sending the notice.

15. No Waiver. Either party's failure to enforce any provision or provisions of this Agreement shall not in any way be construed as a waiver of any such provision or provisions, nor prevent that party from thereafter enforcing each and every other provision of this Agreement. The rights granted both parties herein are cumulative and shall not constitute a waiver of either party's right to assert all other legal remedies available to it under the circumstances.

16. Successors and Assigns. The Company may assign any of its rights under this Agreement to single or multiple assignees, and this Agreement shall inure to the benefit of the successors and assigns of the Company. Subject to the restrictions on transfer herein set forth, this Agreement shall be binding upon Participant and his or her heirs, executors, administrators, successors and assigns. The rights and obligations of Participant under this Agreement may only be assigned with the prior written consent of the Company.

17. Interpretation. Any dispute regarding the interpretation of this Agreement shall be submitted by Participant or by the Company forthwith to the Administrator, which shall review such dispute at its next regular meeting. The resolution of such a dispute by the Administrator shall be final and binding on all parties.

18. Additional Documents. Participant agrees upon request to execute any further documents or instruments necessary or desirable to carry out the purposes or intent of this Agreement.

19. Governing Law; Severability. This Agreement is governed by the internal substantive laws, but not the choice of law rules, of California. In the event that any provision hereof becomes or is declared by a court of competent jurisdiction to be illegal, unenforceable or void, this Agreement shall continue in full force and effect.

20. Entire Agreement. The Plan is incorporated herein by reference. The Plan and this Agreement (including the exhibits referenced herein) constitute the entire agreement of the parties with respect to the subject matter hereof and supersede in their entirety all prior undertakings and agreements of the Company and Participant with respect to the subject matter hereof, and may not be modified adversely to Participant's interest except by means of a writing signed by the Company and Participant.

Participant acknowledges receipt of a copy of the Plan and represents that he or she is familiar with the terms and provisions thereof, and hereby accepts this Agreement subject to all of the terms and provisions thereof. Participant has reviewed the Plan and this Agreement in their entirety, has had an opportunity to obtain the advice of counsel prior to executing this Agreement and fully understands all provisions of this Agreement. Participant hereby agrees to accept as binding, conclusive and final all decisions or interpretations of the Administrator upon any questions arising under the Plan or this Agreement. Participant further agrees to notify the Company upon any change in the residence address indicated below.

GLENN OCLASSEN

/s/ Glenn Oclassen
Signature

Glenn A. Oclassen
Print Name

Residence Address

VERRICA PHARMACEUTICALS INC.

/s/ Matthew Davidson
By

Matthew Davidson
Print Name

President and Chief Executive Officer
Title

EXHIBIT A

INVESTMENT REPRESENTATION STATEMENT

PARTICIPANT	:	GLENN OCLASSEN
COMPANY	:	VERRICA PHARMACEUTICALS INC.
SECURITY	:	COMMON STOCK
AMOUNT	:	142,132
DATE	:	JULY 30 2014

In connection with the purchase of the above-listed Securities, the undersigned Participant represents to the Company the following:

(a) Participant is aware of the Company's business affairs and financial condition and has acquired sufficient information about the Company to reach an informed and knowledgeable decision to acquire the Securities. Participant is acquiring these Securities for investment for Participant's own account only and not with a view to, or for resale in connection with, any "distribution" thereof within the meaning of the Securities Act of 1933, as amended (the "Securities Act").

(b) Participant acknowledges and understands that the Securities constitute "restricted securities" under the Securities Act and have not been registered under the Securities Act in reliance upon a specific exemption therefrom, which exemption depends upon, among other things, the bona fide nature of Participant's investment intent as expressed herein. In this connection, Participant understands that, in the view of the Securities and Exchange Commission, the statutory basis for such exemption may be unavailable if Participant's representation was predicated solely upon a present intention to hold these Securities for the minimum capital gains period specified under tax statutes, for a deferred sale, for or until an increase or decrease in the market price of the Securities, or for a period of one year or any other fixed period in the future. Participant further understands that the Securities must be held indefinitely unless they are subsequently registered under the Securities Act or an exemption from such registration is available. Participant further acknowledges and understands that the Company is under no obligation to register the Securities. Participant understands that the certificate evidencing the Securities shall be imprinted with any legend required under applicable state securities laws.

(c) Participant is familiar with the provisions of Rule 701 and Rule 144, each promulgated under the Securities Act, which, in substance, permit limited public resale of "restricted securities" acquired, directly or indirectly from the issuer thereof, in a non-public offering subject to the satisfaction of certain conditions. Rule 701 provides that if the issuer qualifies under Rule 701 at the time of the grant of the Restricted Stock Award to Participant, the exercise shall be exempt from registration under the Securities Act. In the event the Company becomes subject to the reporting requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, ninety (90) days thereafter (or such longer period as any market stand-off agreement may require) the Securities

exempt under Rule 701 may be resold, subject to the satisfaction of the applicable conditions specified by Rule 144, including in the case of affiliates (1) the availability of certain public information about the Company, (2) the amount of Securities being sold during any three (3) month period not exceeding specified limitations, (3) the resale being made in an unsolicited "broker's transaction", transactions directly with a "market maker" or "riskless principal transactions" (as those terms are defined under the Securities Exchange Act of 1934) and (4) the timely filing of a Form 144, if applicable.

In the event that the Company does not qualify under Rule 701 at the time of grant of the Restricted Stock Award, then the Securities may be resold in certain limited circumstances subject to the provisions of Rule 144, which may require (i) the availability of current public information about the Company; (ii) the resale to occur more than a specified period after the purchase and full payment (within the meaning of Rule 144) for the Securities; and (iii) in the case of the sale of Securities by an affiliate, the satisfaction of the conditions set forth in sections (2), (3) and (4) of the paragraph immediately above.

(d) Participant further understands that in the event all of the applicable requirements of Rule 701 or 144 are not satisfied, registration under the Securities Act, compliance with Regulation A, or some other registration exemption shall be required; and that, notwithstanding the fact that Rules 144 and 701 are not exclusive, the Staff of the Securities and Exchange Commission has expressed its opinion that persons proposing to sell private placement securities other than in a registered offering and otherwise than pursuant to Rules 144 or 701 shall have a substantial burden of proof in establishing that an exemption from registration is available for such offers or sales, and that such persons and their respective brokers who participate in such transactions do so at their own risk. Participant understands that no assurances can be given that any such other registration exemption shall be available in such event.

PARTICIPANT

Signature

Glenn A. Oclassen
Print Name

August 7 2014
Date

EXHIBIT B-1

ASSIGNMENT SEPARATE FROM CERTIFICATE

FOR VALUE RECEIVED I, Glen Oclassen, hereby sell, assign and transfer unto Verrica Pharmaceuticals Inc. shares of the Common Stock of Verrica Pharmaceuticals Inc. standing in my name on the books of said corporation represented by Certificate No. herewith and do hereby irrevocably constitute and appoint to transfer the said stock on the books of the within named corporation with full power of substitution in the premises.

This Stock Assignment may be used only in accordance with the Restricted Stock Purchase Agreement between Verrica Pharmaceuticals Inc. and the undersigned dated , (the "Agreement").

Dated: _____,____ Signature: _____

INSTRUCTIONS: Please do not fill in any blanks other than the signature line. The purpose of this assignment is to enable the Company to exercise its "repurchase option," as set forth in the Agreement, without requiring additional signatures on the part of Participant.

EXHIBIT B-2

JOINT ESCROW INSTRUCTIONS

_____, ____

Corporate Secretary
Verrica Pharmaceuticals Inc.
XXX
XXX

Dear _____:

As Escrow Agent for both Verrica Pharmaceuticals Inc. (the "Company"), and the undersigned purchaser of stock of the Company (the "Participant"), you are hereby authorized and directed to hold the documents delivered to you pursuant to the terms of that certain Restricted Stock Purchase Agreement (the "Agreement") between the Company and the undersigned, in accordance with the following instructions:

1. In the event the Company and/or any assignee of the Company (referred to collectively for convenience herein as the "Company") exercises the Company's repurchase option set forth in the Agreement, the Company shall give to Participant and you a written notice specifying the number of shares of stock to be purchased, the purchase price, and the time for a closing hereunder at the principal office of the Company. Participant and the Company hereby irrevocably authorize and direct you to close the transaction contemplated by such notice in accordance with the terms of said notice.

2. At the closing, you are directed (a) to date the stock assignments necessary for the transfer in question, (b) to fill in the number of shares being transferred, and (c) to deliver the stock assignments, together with the certificate evidencing the shares of stock to be transferred, to the Company or its assignee, against the simultaneous delivery to you of the purchase price (by cash, a check, or some combination thereof) for the number of shares of stock being purchased pursuant to the exercise of the Company's repurchase option.

3. Participant irrevocably authorizes the Company to deposit with you any certificates evidencing shares of stock to be held by you hereunder and any additions and substitutions to said shares as defined in the Agreement. Participant does hereby irrevocably constitute and appoint you as Participant's attorney-in-fact and agent for the term of this escrow to execute with respect to such securities all documents necessary or appropriate to make such securities negotiable and to complete any transaction herein contemplated, including but not limited to the filing with any applicable state blue sky authority of any required applications for consent to, or notice of transfer of, the securities. Subject to the provisions of this paragraph 3, Participant shall exercise all rights and privileges of a stockholder of the Company while the stock is held by you.

4. Upon written request of Participant, but no more than once per calendar year, unless the Company's repurchase option has been exercised, you shall deliver to Participant a certificate or certificates representing so many shares of stock as are not then subject to the Company's repurchase option. Within one hundred and twenty (120) days after cessation of Participant's continuous employment by or services to the Company, or any parent or subsidiary of the Company, you shall deliver to Participant a certificate or certificates representing the aggregate number of shares held or issued pursuant to the Agreement and not purchased by the Company or its assignees pursuant to exercise of the Company's repurchase option.

5. If at the time of termination of this escrow you should have in your possession any documents, securities, or other property belonging to Participant, you shall deliver all of the same to Participant and shall be discharged of all further obligations hereunder.

6. Your duties hereunder may be altered, amended, modified or revoked only by a writing signed by all of the parties hereto.

7. You shall be obligated only for the performance of such duties as are specifically set forth herein and may rely and shall be protected in relying or refraining from acting on any instrument reasonably believed by you to be genuine and to have been signed or presented by the proper party or parties. You shall not be personally liable for any act you may do or omit to do hereunder as Escrow Agent or as attorney-in-fact for Participant while acting in good faith, and any act done or omitted by you pursuant to the advice of your own attorneys shall be conclusive evidence of such good faith.

8. You are hereby expressly authorized to disregard any and all warnings given by any of the parties hereto or by any other person or corporation, excepting only orders or process of courts of law and are hereby expressly authorized to comply with and obey orders, judgments or decrees of any court. In case you obey or comply with any such order, judgment or decree, you shall not be liable to any of the parties hereto or to any other person, firm or corporation by reason of such compliance, notwithstanding any such order, judgment or decree being subsequently reversed, modified, annulled, set aside, vacated or found to have been entered without jurisdiction.

9. You shall not be liable in any respect on account of the identity, authorities or rights of the parties executing or delivering or purporting to execute or deliver the Agreement or any documents or papers deposited or called for hereunder.

10. You shall not be liable for the outlawing of any rights under the Statute of Limitations with respect to these Joint Escrow Instructions or any documents deposited with you.

11. You shall be entitled to employ such legal counsel and other experts as you may deem necessary properly to advise you in connection with your obligations hereunder, may rely upon the advice of such counsel, and may pay such counsel reasonable compensation therefor.

12. Your responsibilities as Escrow Agent hereunder shall terminate if you shall cease to be an officer or agent of the Company or if you shall resign by written notice to each party. In the event of any such termination, the Company shall appoint a successor Escrow Agent.

13. If you reasonably require other or further instruments in connection with these Joint Escrow Instructions or obligations in respect hereto, the necessary parties hereto shall join in furnishing such instruments.

14. It is understood and agreed that should any dispute arise with respect to the delivery and/or ownership or right of possession of the securities held by you hereunder, you are authorized and directed to retain in your possession without liability to anyone all or any part of said securities until such disputes shall have been settled either by mutual written agreement of the parties concerned or by a final order, decree or judgment of a court of competent jurisdiction after the time for appeal has expired and no appeal has been perfected, but you shall be under no duty whatsoever to institute or defend any such proceedings.

15. Any notice required or permitted hereunder shall be given in writing and shall be deemed effectively given upon personal delivery or upon deposit in the United States Post Office, by registered or certified mail with postage and fees prepaid, addressed to each of the other parties thereunto entitled at the following addresses or at such other addresses as a party may designate by ten (10) days advance written notice to each of the other parties hereto.

16. By signing these Joint Escrow Instructions, you become a party hereto only for the purpose of said Joint Escrow Instructions; you do not become a party to the Agreement.

17. This instrument shall be binding upon and inure to the benefit of the parties hereto, and their respective successors and permitted assigns.

18. These Joint Escrow Instructions shall be governed by the internal substantive laws, but not the choice of law rules, of California.

GLENN OCLASSEN

Signature

Glenn A. Oclassen
Print Name

Residence Address

VERRICA PHARMACEUTICALS INC.

By

Matthew Davidson
Print Name

President and Chief Executive Officer
Title

ESCROW AGENT

_____

Corporate Secretary

Dated: _____

EXHIBIT B-3

ELECTION UNDER SECTION 83(b)
OF THE INTERNAL REVENUE CODE OF 1986

The undersigned taxpayer hereby elects, pursuant to Section 83(b) of the Internal Revenue Code of 1986, as amended, to include in taxpayer's gross income or alternative minimum taxable income, as the case may be, for the current taxable year the amount of any compensation taxable to taxpayer in connection with taxpayer's receipt of the property described below.

1. The name, address, taxpayer identification number and taxable year of the undersigned are as follows:

   NAME: _____ SPOUSE: _____

   ADDRESS: _____

   _____

   TAXPAYER IDENTIFICATION NO.: _____ TAXABLE YEAR: _____

2. The property with respect to which the election is made is described as follows: _____ shares (the "Shares") of the Common Stock of Verrica Pharmaceuticals Inc. (the "Company").

3. The date on which the property was transferred is: _____ ,_____.

4. The property is subject to the following restrictions:

   The Shares may not be transferred and are subject to forfeiture under the terms of an agreement between the taxpayer and the Company. These restrictions lapse upon the satisfaction of certain conditions contained in such agreement.

5. The Fair Market Value at the time of transfer, determined without regard to any restriction other than a restriction which by its terms shall never lapse, of such property is: $_____.

6. The amount (if any) paid for such property is: $_____.

The undersigned has submitted a copy of this statement to the person for whom the services were performed in connection with the undersigned's receipt of the above-described property. The transferee of such property is the person performing the services in connection with the transfer of said property.

The undersigned understands that the foregoing election may not be revoked except with the consent of the Commissioner.

Dated: _____, _____

_____
Taxpayer

The undersigned spouse of taxpayer joins in this election.

Dated: _____, _____

_____
Spouse of Taxpayer

VERRICA PHARMACEUTICALS INC.

ACKNOWLEDGEMENT AND AMENDMENT TO RESTRICTED STOCK PURCHASE AGREEMENT

This Acknowledgement and Amendment to Restricted Stock Purchase Agreement (this "Amendment"), dated as of January 31, 2018, is made by and among Verrica Pharmaceuticals Inc., a Delaware corporation (the "Company"), The Glenn A. Oclassen 2016 Trust dated November 30, 2016 ("Transferee"), and Glenn Oclassen ("Participant").

BACKGROUND

A. The Company and Participant entered into a Restricted Stock Purchase Agreement on August 7, 2014 (the "RSPA"), pursuant to which the Company granted to Participant a right to purchase 142,132 shares of Common Stock of the Company (the "Restricted Stock"), as described therein and upon the terms and subject to the conditions set forth therein.

B. The RSPA erroneously referenced and incorporated the terms of a "2014 Equity Incentive Plan" of the Company, instead of the 2013 Equity Incentive Plan of the Company.

C. Participant transferred the Restricted Stock to Transferee pursuant to Section 12(f) thereof.

D. The Company, Participant and Transferee desire to set forth an acknowledgement that the Restricted Stock now held by Transferee remains subject to the terms of the RSPA, and to amend the RSPA to correct the error described above, as set forth herein.

AGREEMENT

NOW, THEREFORE, in consideration of the mutual covenants and agreements contained in this Amendment and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned agree as follows:

1. Acknowledgement. The Company, Participant and Transferee all acknowledge and agree that, as the transferee of the Restricted Stock under the RSPA, Transferee received and holds the Restricted Stock subject to the provisions of the RSPA, including but not limited to the Company's right of first refusal in Section 12 thereof.

2. Amendment. The Company and Transferee agree that the RSPA is hereby amended to delete the phrase "2014 Equity Incentive Plan" above the title of the Agreement and in the preamble of the RSPA and that such phrase shall be replaced in both instances with "2013 Equity Incentive Plan," such that the defined term "Plan" used throughout the RSPA shall mean the 2013 Equity Incentive Plan of the Company.

3. Effect of Amendment. Except as otherwise provided herein, all of the provisions of the RSPA are hereby ratified and confirmed and all the terms, conditions and provisions thereof remain in full force and effect.

[Signature Page Follows]

IN WITNESS WHEREOF, the undersigned have executed this Acknowledgement and Amendment to Restricted Stock Purchase Agreement as of the date first set forth above.

COMPANY:

VERRICA PHARMACEUTICALS INC.

By: /s/ Ted White
Name: Ted White
Title: CEO

PARTICIPANT:

/s/ Glenn Oclassen
Name: Glenn Oclassen

TRANSFEREE:

THE GLEN A. OCLASSEN 2016 TRUST
DATED NOVEMBER 30, 2016

By: /s/ Glenn Oclassen
Name: Glenn Oclassen
Title: Trustee